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SHAW BANKING SERIES

# ACCOUNTING AND COSTS







# **THE SHAW BANKING SERIES**

## **ACCOUNTING AND COSTS**

***THE SERIES:* ADVERTISING AND SERVICE; ACCOUNT-  
ING AND COSTS; LOANS AND DISCOUNTS; EXECUTIVE  
CONTROL; BUILDINGS, EQUIPMENT AND SUPPLIES;  
CREDITS AND COLLECTIONS**

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Here is one method employed by large and small banks to save time and cut costs. Instead of allowing items to accumulate, the tellers in odd moments list and add their checks and turn them over to the accounting department by batches to speed up the clearings.

# ACCOUNTING AND COSTS

**FINDING BANK COSTS—HOW TO CHECK PROFIT  
LEAKS—SIMPLE COST SYSTEMS THAT PAY—  
MAKING EVERY ACCOUNT PROFITABLE—  
TESTED WAYS TO REDUCE COSTS**

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## WHY THIS BOOK CAN HELP YOU

**T**HE purpose of this book is to explain the principles underlying the determination and control of costs of doing business in a bank, and as well, some management problems closely allied with costing in a bank. It is planned to be broad enough to apply to banks of all types. It is intended to be detailed enough to prove useful in tabulating and distributing cost statistics without disturbing the usual routine. It aims, as one of its objects, to show you what your costs ought to tell you as well as how to devise a system that will apply to every department of your bank.

The methods and plans outlined should serve adequately in furnishing you with a means of finding your costs. They will help you also distribute the expenses so that each of the different departments will bear a proportionate share.

Since more than 70% of the banks of the United States are so-called "country banks," many are unable to purchase the expert assistance which the large banks have drawn on in developing their cost-accounting systems. This book should help these smaller banks meet this situation in addition to proving suggestive to the large banks, for the plans described in it show how the most important banks are solving the cost problem and at the same time indicate how a simple and effective cost system may be adapted to meet the needs of the bank of average size. The various factors that enter into an accurate cost system are so handled that they can be understood and applied by the average cashier of the average small bank without in the least sacrificing that degree of thoroughness and accuracy essential to the success of any cost system.

The doubt which may first arise in the minds of those in small banks, on reading this book, will probably be: "How can I keep up all the systems and analyses suggested and still have any time left to run my business?" That is a natural enough doubt, but it can be quickly dispelled right here.

It is not necessarily intended that all the detailed systems described in the book be installed in the small bank—the systems are described in detail so that a broad conception of their possible uses can be obtained. Rather it is intended that, after studying the complete systems and thereby securing a clear idea of the fundamentals underlying them, the small bank install only such costing plans as it feels sure it can carry along easily, and then expand its cost analyses from time to time, if it can. Some cost-finding work is better than none; in other words, a very little cost-finding work in a very little bank may result in very big proportionate savings, and it's always wisest to begin cost work on a conservative scale.

An accurate cost system requires systematic accounting in all departments, it is true, yet there are many branches of bank accounting which the limited space of a single volume bars from this book. It is indeed quite beyond the scope of this volume to describe all of the detailed accounting methods that exist in the modern bank, but in the volumes on Loans and Discounts, Credits and Collections, and Internal Management, which are to follow, additional effective plans for establishing an accounting system that will speed up the work, lessen errors, and provide more satisfactory service, are to be described.

This volume was prepared by Joseph M. Regan, the editor in charge of the series, who wishes to acknowledge the cooperation he has had in his work from J. S. Baley and Warren J. Avery of the editorial staff of the book department of the A. W. Shaw Company. On a separate page, acknowledgment is made of the valuable assistance of many banks which freely contributed from their own perfected methods that others might gain more profitable plans from the book.

# **PART I**

## **FINDING BANK COSTS**

## THEY HELPED PREPARE THE BOOK

This book is the result of a nation-wide investigation. Many courtesies have been extended by the Comptroller of Currency; The First National Bank of Boston; The Market and Fulton Bank, New York; The First National Bank, Philadelphia; The Hibernia Bank and Trust Company, New Orleans; First National Bank, Los Angeles; Old National Bank, Spokane; Spokane and Eastern Trust Company, Spokane; Northwestern National Bank, Minneapolis; National Farmers' Bank, Owatonna, Minnesota; Marshall and Ilsley Bank, Milwaukee; Third National Bank, St. Louis; Northern Trust Company, Chicago; Peoples' National Bank, Rushville, Indiana; First National Bank, Kalamazoo, Michigan; National Bank of the Republic, Chicago; First National Bank, La Junta, Colorado; National Bank of Commerce, St. Louis; Fifth-Third National Bank, Cincinnati; First National Bank, Connersville, Indiana; Sheridan Trust and Savings Bank, Chicago; First National Bank of Englewood, Chicago; Big Rapids Savings Bank, Big Rapids, Michigan; Bluefield National Bank, Bluefield, West Virginia; Bank of Morehead City, Morehead, North Carolina; Boone National Bank, Boone, Iowa; Corn Exchange National Bank, Chicago; Greenebaum Sons Bank and Trust Company, Chicago; Continental and Commercial National Bank, Chicago; Fort Dearborn National Bank, Chicago.

To these, and to many other banks not listed, the thanks of those who find the book helpful are first of all due. The publishers themselves wish to take advantage of this opportunity to express to the broad-minded men in charge of these banks appreciation and admiration of a generous and unprecedented unselfish offering of so-called "business secrets" that the progress of banking as a whole might be stimulated.

## CHAPTER I

### WHAT YOUR COST SYSTEM SHOULD SHOW YOU

**A**FTER installing a simple cost system a state bank in the Middle West found that during one month it had lost \$356.13 in its commercial department. This loss was offset by a profit of \$569 in the mortgage loan department and one of about \$200 in the savings department. The methods used to discover these results are shown in Figures 1, 2, 3, and 4.

"We worked on our cost system for more than a year before we began to draw off the results," said the president of this bank, "but when our first computation was made it confirmed our suspicion that the commercial department was running at a loss. It indicated also the exact condition in dollars and cents of every department in the bank."

Now, the cost system was effective because it enabled this banker to dig down deep into the internal affairs of his bank and to ascertain exactly the departments which were a source of profit and those which were a cause of loss. It was specifically helpful in the particular instance cited also because it provided him with a definite basis for analyzing the losses in his commercial department. It showed him in detail the business which was earning the revenue. It revealed, furthermore, the necessity for a thorough survey of the commercial business in his territory—when this survey was made it was found that the one big drawback to profits in the commercial department was an ultra-conservative loan policy, a policy

## 2 FINDING BANK COSTS

which had been resisted right in the face of sharp competition by other banks in the neighborhood, which evidently were not impairing their strength or their safety by extending more liberal accommodations to customers.

Thus, this cost system brought to the surface several hard, cold facts about the bank's earning possibilities. It showed, first of all, the loss in the commercial department in one month and the profits in the other departments, and it indicated also the nature of the remedy that was needed to bring the commercial department up to a profit-producing level.

Before relaxing its policy in commercial credit extension, the bank decided to analyze the accounts in its commercial department along the line described in Chapter VII.

This analysis showed that one account which maintained an average balance of about \$10,000 actually was resulting in a loss of \$37.50 a month. It was a factory payroll account. Many small checks issued against it kept the account in a constant state of expensive activity.

A few days after the analysis was completed, the factory owner called at the bank and announced that he intended to withdraw his account, explaining that he was going to move his factory to another town. The banker then explained to him how his account had been carried at a loss to the bank. The depositor expressed surprise, but the banker backed up his statement with the facts and figures disclosed by the analysis. He showed that the cost of handling the items, which will be fully described in pages to follow, coupled with the extraordinary activity of the account, produced a labor charge that wiped out profit.

The problem in this bank, as in many other banks throughout the country, of how to bring up to a profitable level the commercial accounts that show

**Commercial Department  
(Demand Deposits)**

**Earnings**

Bank Interest	\$ 744.22
Mortgage Interest	1095.49
Discount	1153.07
Exchange	210.07
Foreign Exchange	24.48
Sundry Profit	143.56
Miscellaneous Balance Charge and	
Checks Returned	<u>202.75</u>
Total Earnings	\$ 3573.64

**Expenditures**

Advertising	\$ 148.69
Carfare	5.20
Directors	35.00
Government ,	5.00
Light	16.35
Supplies	211.74
Postage	65.10
Salaries	1763.84
Sundries	434.58
Auto	30.00
Telephone	<u>43.77</u>
Total Office Expense	\$ 2759.27

Total Office Expense Forwarded	\$2759.27
Commercial Interest Paid	770.45
Demand Commercial' Deposit Interest	
Paid	9.55
Office Rent	<u>390.50</u>
Total Expense	\$3929.77

Total Earnings	3573.64
Total Expenditure	<u>3929.77</u>
Net Loss	\$ 356.13

Figure 1: Monthly department records of earnings and expenses like this, which give the cost figures for the commercial department, show one bank at a glance the condition of its business—and at small expense, requiring daily less than an hour of the cashier's time.



## FINDING BANK COSTS

fair balances but draw an abnormal number of checks, was partially solved by the adoption of a schedule indicating exactly how many checks certain balances were normally entitled to on the basis of "with interest" or "without interest." This schedule follows:

Average daily balance	Checks all "without interest"	Checks all "with interest"
\$ 1,100	154	132
1,200	168	151
1,300	182	156
1,400	196	162
1,500	210	168
1,600	222	174
1,700	236	180
1,800	250	186
1,900	262	192
2,000	280	198
2,500	350	224
3,000	420	252
3,500	490	285
4,000	560	308
5,000	700	366
7,500	1,050	505
10,000	1,400	602
20,000	2,800	1,204
30,000	4,200	1,806
40,000	5,600	2,408
50,000	7,000	3,010
60,000	8,400	3,612
70,000	9,600	4,214
80,000	11,000	4,816
90,000	12,400	5,418
100,000	14,000	6,020

The number of checks each customer was allowed to put through each month on each average balance without having a penalty charge assessed to take care of the cost, was:

Average balance	Checks	Average balance	Checks
\$ 50	7	550	76
100	14	600	82
150	21	650	88
200	28	700	94
250	34	750	104
300	42	800	110
350	48	850	116
400	56	900	122
450	62	950	130
500	70	1,000	140

If the depositor drew an abnormal number of checks against his balance, in any one month, a penalty was assessed in much the same manner as that described in Chapter VII. In other words, it was not alone enough to watch the minimum balance maintained by each depositor from month to month to arrive at the cost of handling an account. It was necessary also to keep close track of the number of checks drawn.

The demonstrated practicability and profit-saving possibilities of a cost system in this bank is indicative of the results obtained in many other banks which are analyzing the activity of the various departments and thus accurately determining their detailed profits and losses. A nation-wide investigation just completed by SYSTEM, the Magazine of Business, disclosed exactly how this banker and scores of others meet and solve the ever-growing problem of rising costs. These methods will be described in the chapters that follow.

ACCURATE COST SYSTEMS PROPERLY APPLIED INVARI-  
ABLY REDUCE ROUTINE TO A MINIMUM

Many bankers, it is true, have hesitated about installing a cost system, feeling that it might involve too much red tape and require additional labor and other expense. The investigation showed, however, that precise cost finding does not necessarily disturb existing accounting methods or impose extra burdens on the payroll. In every bank there are certain sources of revenue and certain items of expense which, classified along lines that will be described later, point the way to the adoption of a system that will quickly reveal bed-rock profit and loss conditions.

In any bank well-defined lines should be drawn between the various generally recognized departmental activities in a manner similar to that already shown. The size of the bank does not matter in this respect. Even in a small bank, it is a simple step to separate

**Mortgage Loan Department  
(Time Loans)**

**Earn**

Bank Interest	\$ 206.74
Mortgage Interest	1303.06
Discount	<u>1371.55</u>
 Total	 \$ 2881.35

**Expenditures**

Advertising	\$ 41.00
Directors	20.00
Government	0.00
Light	8.19
Supplies	53.00
Salaries	444.96
Sundries	<u>15.64</u>
Total Office Expense	\$ 582.79
Savings Interest Paid	1292.92
Time C.D. Interest Paid	234.14
Office Rent	127.50
Premium on Stock and Bond	<u>75.00</u>
 Total	 \$ 2312.35
Earnings	<u>2881.35</u>
Net Profit	\$ 569.00

Figure 2: This monthly record of the mortgage loan department; which is kept like the others in a looseleaf book, gives the banker detailed and valuable data for comparing profits and losses from month to month. Note the profit here of \$569.

the functional activities into departmental divisions just as they are worked out in larger banks. The importance of this classification is fully considered in Chapter IV. The usual departments in many banks, investigation showed, have been grouped under three divisions about as follows:

Item. Bookkeeping, clearing house, incoming, outgoing, inside clearing house, credits, debits, mail and tellers, receiving, other tellers, transit.

Non-Item. Auditing, collection, loans and discounts.

Item and Non-Item. Credit and statistical, employment, exchange, filing, investment, mechanical equipment, porters, shipment, stenographic, trust, and miscellaneous departments.

There is a decided advantage in this classification, because it enables the banker to deal, in a specific way, with "cash items," which are an important factor in the accurate finding of costs and consequently in the determination of earnings. It also simplifies the handling of items from the time they are received until they are finally disposed of. The three real sources of items are generally classified as follows:

Clearing House—Incoming.

Counter—Cashed, deposited, exchanged for collections, drafts or notes.

Mail—Incoming.

The three channels through which all the items thus received find disposition or their way out are:

Clearing House—Outgoing.

Inside Clearing House—Checks and credits or deposits for direct entry on the bank's books.

Mail—Outgoing (transit).

Thus the process is practically a continuous one and time and labor is saved. This method of handling

the item departments helps the bank to lay out an effective physical plan for all cages, desks and mechanical equipment so as to permit the incoming items to be sent in one direction to a central clearing or distributing room, from which they will be sent in turn to the bookkeeping department for entry on the bank's books or to the two outgoing item departments. This plan will be more fully described in Chapter XVI.

Now, while there are certain general principles of cost finding always present, the application of these principles is, of course, influenced by the size and the type of the bank and the sectional conditions peculiar to its field. The small bank in the heart of the sheep district of Wyoming, for example, faces a different problem than the small bank in the Lake Superior copper field of Michigan, because these banks handle different classes of commercial loans and the maturities usually differ. Still, it is also true that there exists in each type of bank certain similar items of expense such as rent, salaries, and other items of overhead (as well as the more detailed expense such as the costs of opening accounts, handling checks, notes, drafts, certificates of deposits and so on). In any bank, therefore, the basic plan should be so clearly defined that details can be added or dropped as closer analysis requires, or as new business develops.

The extent and the limitations of the cost plan are other factors that deserve careful consideration if the best results are to be obtained. Investigation indicated that some bankers, especially those in the country districts, sometimes make the mistake of introducing methods that go into too much detail on items where the total cost of handling does not justify the expense involved.

A Michigan bank with total deposits of about \$1,200,000, for example, adopted an account analysis system and proceeded to analyze all of its accounts

### Net earnings by departments

<b>Demand deposits</b>		
Profit		\$487.04
Loss		0.00
<b>Time deposits</b>		
Profit		1039.44
Loss		0.00
<b>Real estate loans</b>		
Profit		2090.94
Loss		0.00
<b>Renting</b>		
Profit		0.00
Loss		35.31
<b>Insurance</b>		
Profit		21.55
Loss		0.00
<b>Real estate sales</b>		
Profit		0.00
Loss		123.29
<b>Vault</b>		
Profit		0.00
Loss		3.46
<b>Building</b>		
Profit		1090.03
Loss		0.00
<b>Capital</b>		
Profit		259.15
Loss		0.00.
<b>Total profit</b>	.....	\$ 4988.15
<b>Total losses</b>	.....	162.06
<b>Net profits</b>	.....	\$ 4826.09

Figure 3: From the itemized records of each department, described in Figures 1 and 2, this summarized report is easily drawn, showing the distribution of profit and loss in each department for a month. It tells graphically just what revenues this bank produced.

Items	Amount
Advertising	\$1018.15
Carfare	20.70
Directors' fees	90.00
Government	5.00
Legal	0.00
Light	49.05
Supplies	376.78
Postage	142.10
Salaries	3532.92
Sundries	569.64
Automobile	201.31
Telephone	78.66
Total .....	<u>\$6084.31</u>
Commercial interest paid	\$770.45
Savings interest paid	1292.92
Time C.D. paid	234.14
Demand C.D. int. paid	9.55
Personal property tax	580.00
Real estate tax	0.00
Office Rent	750.00
Premium on stocks and bonds	75.00
Total .....	<u>\$9796.37</u>
Earnings	\$11895.17
Expenses	<u>9796.37</u>
Total earnings .....	<u>\$2098.80</u>

Figure 4: Here is shown how one bank distributes its expenditures for one month. Note that in classifying the costs of doing business in this simple way, large purchases such as an automobile are proportioned over the 12 months of the fiscal year.

at brief intervals. Naturally the expense of making this analysis in its details was considerably more than the saving and the control afterward realized, and the system was abandoned. Now, it is interesting to contrast this experience with that of a medium-sized middle western bank which has perfected a satisfactory account analysis system. This bank analyzes less than 3% of its accounts in determining item cost, but its system is nevertheless valuable because it can be used whenever required and produces results that are accurate and helpful.

A COST SYSTEM TO BE EFFECTIVE MUST FIRST BE THOROUGHLY WORKED OUT AND THEN APPLIED STEP BY STEP

Sometimes, investigation also indicated, cost systems in some of the banks in reserve cities were expensive to operate because the methods were complicated instead of simple, and the details in calculating, checking, posting, and so on, were therefore neglected.

Any cost system to be effective should be installed gradually, most banks feel. Each new step should be thoroughly tested out before others are attempted. Otherwise, so much confusion may follow that the effectiveness of the system may be undermined or the bookkeepers, tellers and clerks will be so prejudiced against it as to lessen its value.

Back of any worth-while cost system, therefore, is the necessity for a solid foundation which will bring out every detail of the costs and provide for a clear and definite classification of the items (see Chapter III). At each step in developing a system that will fit the needs of the bank, it is essential to arrange the data so as to convey at a glance an accurate knowledge of the internal activities.

When this is done along the lines indicated in the following chapters, it will be easier to take off a daily analytical statement of the certain quick-moving



assets that are unproductive, such as cash on hand, nationals, nickels and cents, cash items, exchanges, interest receivable, redemption fund, deposits in reserve banks, and sundry items. By analyzing these items daily, the danger of allowing them to run a little larger than they should is removed. It is desirable to keep these unproductive assets as low as possible (see Chapter VIII), in proportion to deposits, because as deposits increase these items will increase and as deposits decrease they should also decrease. A simple cost system based upon an analysis of each department ought to, and will, reveal daily how much the "uncontrollable," unproductive moving assets are and thus help to keep them at a minimum.

Then follows naturally the classification of the expenses and the distribution to the various departments; the analysis of accounts and the determination of the item cost; the tabulation of the salary expense (which ordinarily represents 50% or more of the operating costs) and the compilation of other fixed charges; the control of the purchasing department, and the influence of the building on costs.

Finally comes the proving of the total costs, the determination of the income and the checking of the interest account. The compilation of the general summaries is, of course, quite different from the detailed classification of the different elements that enter into the costs.

So we see that the task of fitting a cost system to the bank is not accomplished until every item is included in the calculation, classified by departments, and a statement drawn off showing accurately the condition of the bank.

## CHAPTER II

### FITTING A COST SYSTEM TO YOUR NEEDS

**W**HEN a Michigan bank installed a cost system "right off the reel" it ran into the problem of distributing the administrative expense—the salaries of the officers. This is a large item in almost all banks, and usually most of the officers are concerned with the broad duties of internal management rather than with the mechanical direction of any separate department. It was therefore necessary in this Michigan bank to work out a method which would distribute to each department its proportionate share of the administrative expense.

In order to control this item, as well as other items in the operating cost, the expense was divided under the four heads shown in Figure 5. The expense of advertising, charity and donations, legal fees, examinations, and traveling was kept in a separate column.

Proper division of the officers' salaries depends, of course, on the organization of each particular bank and the type of business handled. A national bank in the East, for example, with deposits of about \$6,000,000, which included many large individual commercial accounts and only a small savings department, has three officers. A state bank of the same size in the MiddleWest, with a large savings department and more than 3,500 checking accounts, has five officers. Thus, the administrative expenses vary according to the type of the business. But in any bank the method illustrated in Figure 5 can be applied by following the general rule that the officers' salaries shall be charged

to each branch of the business on the basis of their value to that branch. To a certain degree this calculation is arbitrary, it is true, but if it is carefully made it usually will prove to be sufficiently accurate.

Now, properly to allocate employees' salaries it is obviously necessary to determine first of all the total payroll and then distribute it to the various branches. In the Michigan bank, as in many other banks, the ordinary time basis is found to be most effective in obtaining an accurate apportionment.

The expense chargeable to rent, light and heat varies widely, investigation indicated. An Indiana bank with deposits of \$1,100,000 occupies a building more than 50 years old—a landmark in the community. The bank owned the building and it estimated that a fair rental value was \$40 a month. Across the street was another bank which had recently moved into a beautiful new building. The deposits in this bank were \$900,000, yet a fair rental value of its banking room was estimated to be \$90 a month.

The smaller bank kept open two evenings a week while the larger bank transacted business only during the day and therefore the light and heat expense was larger in the smaller bank. In the computation shown in Figure 5 the rent was charged to each department according to the floor space occupied (see Chapter XVI) and in this way the bank was able to arrive at a detailed determination of these costs for each department. Space not chargeable to any division, such as the lobby, the ladies' room, the men's rest room, and the like, was apportioned among the divisions according to the space occupied.

In any bank the item of taxes usually is a large one because banks ordinarily have a location in the heart of the community where land values are high. There are, however, other taxes besides the building tax and these naturally should be charged to the division to

which they apply. General taxes and income taxes, for instance, become an expense against capital, surplus, and loans, and the building taxes are divided among the various departments on the same basis as

Expense Accounts	Depositors' Checking Accounts	Capital, Surplus, Profits and Loans	Savings and Certificates	Other Divisions of Business	Totals
Officers' salaries	\$3,300	\$6,600	\$660	\$650	\$11,000
Employees' salaries	5,200	600	325	325	6,800
Rent	4,200	1,200	1,000	1,000	7,600
Taxes		5,000			5,000
Stationery and printing	1,000	250	125	125	1,800
Other supplies	333	83	42	42	500
Telephone and telegraph	333	83	42	42	500
Postage	417	104	52	52	585
Light and heat	170	80	40	40	300
Insurance	80	300	25	25	400
Surety bonds	75	80	25	25	175
Depreciation or maintenance	800	150	133	133	1,000
Bad debts—special losses		500			
Totals	\$15,600	\$15,000	\$2,300	\$2,300	\$35,200

Figure 5: This method of distributing the expense by classifying the business under four heads for convenience simplifies the work and saves considerable time in analyzing the accounts.

the rent. Many banks do not own their own buildings and therefore pay no direct taxes on the real estate.

The expense attributable to buildings and to taxes represents a large item in every bank. Even in the bank where the premises are rented, the rental expense is usually heavy and it is therefore essential in all banks to regulate the building and tax expense if costs are to be carefully controlled. In the volume on internal management and in the volume on buildings, these factors are considered more fully.

Stationery, printing, postage, telephone and telegraph items which occur more or less in all the departments become a general charge and should be divided

among all the departments. In order to make this distribution, it is a simple step to determine how prevalently each item occurs in each division. This obviously does not require a detailed analysis. A

Expense of Depositors' Checking Accounts				
Expense Accounts	Activity	Size	Number	Totals
Officers' salaries	\$1,100	\$1,100	\$1,100	\$3,300
Employees' salaries	2,600	886	1,734	5,200
Rent	2,188		1,062	4,250
Taxes				
Stationery and printing	666		334	1,000
Other supplies	222		111	333
Telephone and telegraph	222		111	333
Postage	313		104	417
Light and heat	128		42	170
Insurance	26	12	12	50
Surety bonds		75		75
Depreciation or maintenance	428		142	568
Bad debts and special losses				
Miscellaneous				
Totals.....	\$8,891	\$2,053	\$4,752	\$15,696

Figure 6: One bank has found of value in determining costs this method of distributing the expenses according to the "activity," the "size," and the "number" of depositors' checking accounts.

survey of the activity in any department for a given period usually will provide a fair determination.

A bank uses different classes of insurance and therefore they should be treated separately. Premiums for burglary insurance and surety bonds should be divided according to the divisions of the business. The proportion due to the insurance of the reserves, for example, is for the protection of checking accounts and savings accounts and the insurance on securities is chargeable to the capital and surplus. Fire insurance is divided on the same basis as the rent.

The advertising cost, like rent and tax items, varies widely. As indicated in the volume on advertising

and service, the savings bank usually spends a great deal more on advertising than the national bank because it must make a wider appeal. But in any bank which maintains two or more departments, the advertising usually is clearly specialized and it is therefore simple to make a clean-cut apportionment.

The expense due to depreciation is an important item. Investigation indicates that in many banks it is overlooked, although, of course, it should be charged off just as it is in a factory or a store. The extent of the charge-off depends upon the bank's physical equipment. If the bank owns its building, the maintenance and depreciation should be apportioned to the divisions as with rent, and the same method should be followed with furniture and fixtures.

## CAREFUL ANALYSIS OF EACH DEPARTMENT MUST PRECEDE THE INSTALLATION OF ANY COST SYSTEM

Since the activity of accounts exerts a sharp influence in the cost of operation, it is considered essential to distribute expense on a basis similar to that outlined in Figure 6. Investigation indicated that no exact basis for this division is possible on account of the different types of business handled by different banks, but the method shown in Figure 6 is adequate to illustrate the manner of setting off the costs in relation to checking accounts. Equal divisions are therefore assumed in considering officers salaries in order to avoid confusing explanation.

Let us turn now to employees' salaries, which is probably the most important factor in this calculation. This item should be divided on a time basis if the best results are to be obtained. That is, the time spent in handling items should go into the activity column, the time spent in bookkeeping should go into the number column, and the time of the watchmen should go into the size column. In a busy country

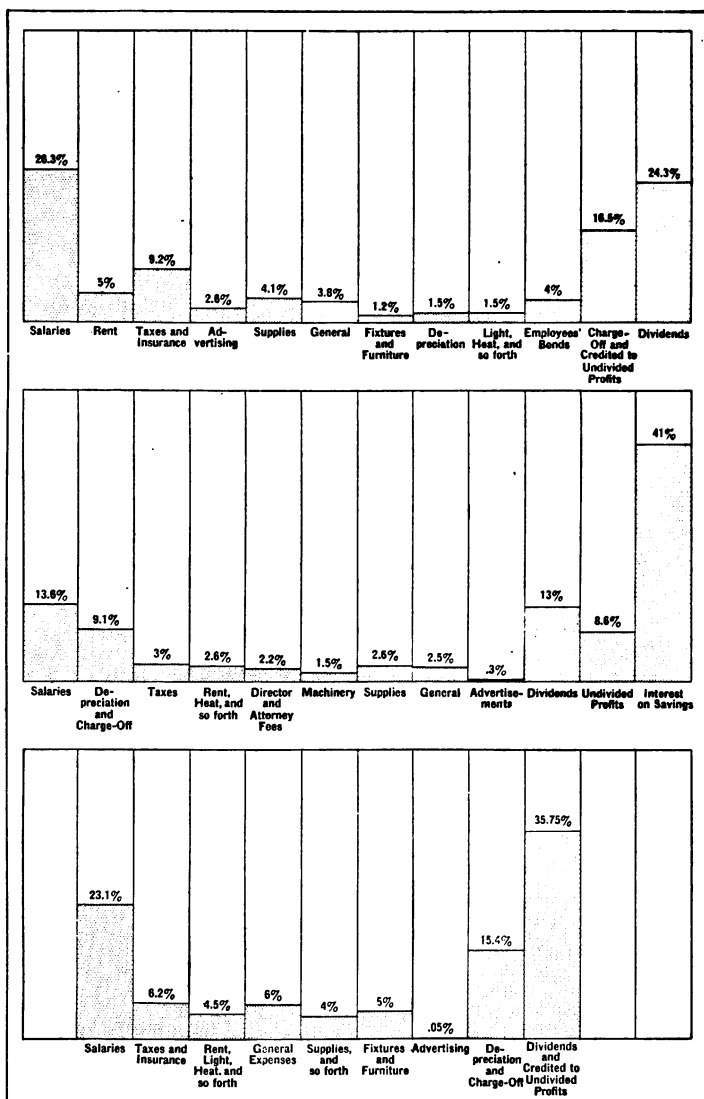
bank, the activity portion might run about one half to three fourths. In a small country bank with only a few transactions daily, the greater portion of employees' salaries is applicable mainly to number.

In the other main items of the overhead, such as rent, light, heat, and fire insurance, a certain portion, say one fourth, should go to the number column because only a minimum force is necessary to handle inactive accounts.

The balance will therefore go to activity to take care of the increasing volume of business. Stationery and printing and other expenses, as telephone and telegraph, are divided according to the consumption, that is the ledger should go to number and the supplies used in handling the items to activity. Postage is distributed three fourths to activity and one fourth to number, and insurance and premiums are chargeable to size. It is important in this calculation to include the depreciation item also. That portion of the furniture and fixtures which applies to the branches handling only the items goes into the activity column, while the depreciation of vaults goes to the size of accounts and the balance is chargeable under the number column. The major portion of the maintenance of the building goes into activity.

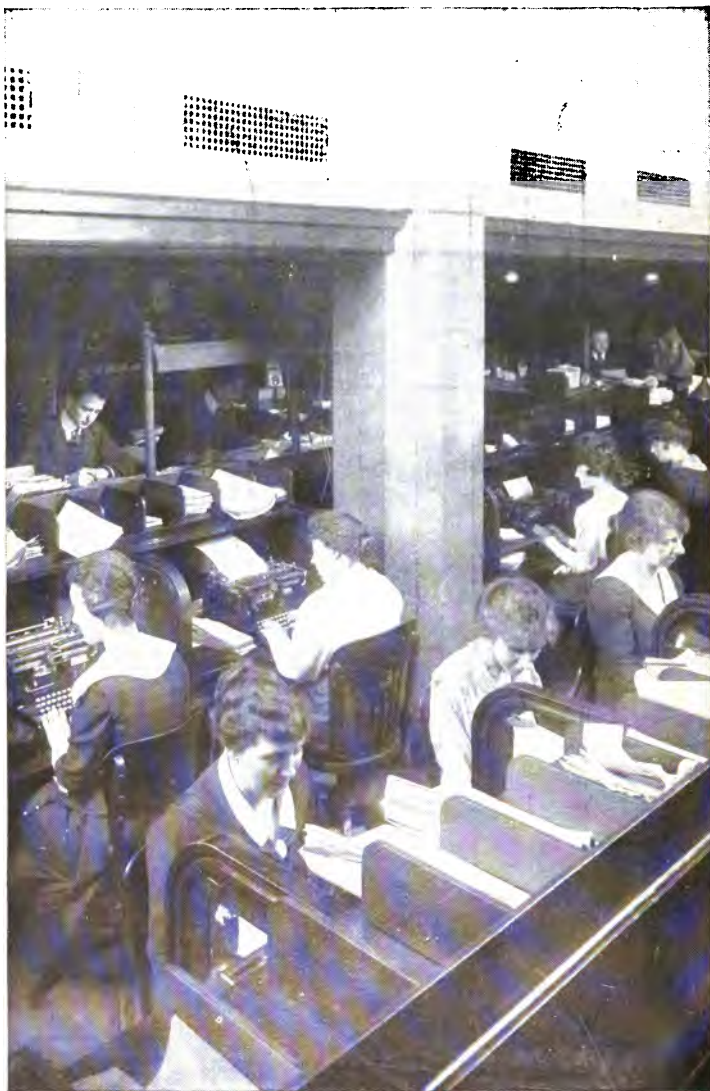
The advantage of the methods already described rests in the fact that they provide for a definite distribution over all the departments and the earnings therefore can be analyzed more accurately. If any department is falling behind or actually causing a loss, the labor and other costs can be readily adjusted to take care of the shrinkage.

In the well-managed bank with deposits of more than \$1,000,000 the percentage of operating expenses based on total deposits is usually from  $1\frac{1}{2}\%$  to  $2\%$ , investigation indicated. Of course there are many small country banks where the costs are much higher



**Figure 7:** In the top and bottom charts "operating expense" of two banks is based on total earnings, less interest paid, which is considered the correct method. Notice how these percentages contrast with the middle figures, which include the "interest paid" item of 41%.





**Figure 8:** These desks speed transit work in the National Bank of the Republic, Chicago. The girls in the foreground are listing checks on adding machines, while behind them, typewriter operators are preparing transit letters. The "in" and "out" compartments save time.

because officers who control the stock take large salaries. In a recent year, for example, a middle western state bank with a capital and surplus of \$475,000 and deposits of \$3,600,000 spent 1.8% of its deposits for operating expenses, or about \$65,000. This, investigation showed, was a reasonable figure. The officers' salaries were confined to the president, cashier, and two assistant cashiers, and this expense was distributed as indicated in Figure 5. Another bank of \$4,000,000 deposits in the same territory, however, spent 2.4% of its total deposits for operation, and the difference in these two banks was due chiefly to the fact that officers' salaries, rent and taxes in the second one were almost seven tenths of 1% higher than in the first bank.

HOW SHOULD THE SALARIES OF OFFICERS BE  
DISTRIBUTED ON THE COST SHEETS?

This contrast is even more marked among small banks. A state bank in Kansas, for example, with deposits of \$485,000 spends 4.1%, and a state bank of the same size in Wisconsin spends 3.8%. In both these banks, typical perhaps of hundreds of other small banks, the officers declared they probably could get their costs down below 2% if they wished to vote themselves a nominal salary.

"Our operating expenses are high," said the Kansas banker, "because I take a large salary as president and the cashier also takes a salary which is larger than is usually paid in a bank of this size. We each take \$300 a month. It is true that I do little work in the bank except to give advice, but the cashier and myself own most of the stock and we vote our own salaries. Each department in our small bank has to carry a big administration charge, to be sure, but I think that since the earnings really belong to us we are entitled to draw them monthly rather than in dividends."

This condition is by no means true with the general run of country banks. In many of these banks the stock is widely scattered. The cashier and the assistant cashier—who are often the only active officers—receive fair salaries, but certainly not as large as those paid in some of the banks where the cashier is a heavy, and sometimes a controlling, stockholder. In a state bank in the Middle West, for instance, the operating cost is 1.1% of the total deposits of \$1,500,000. The principal active officer, the cashier, draws \$2,000 annually and he handles most of the administrative duties outside of those cared for by the board of directors. The president takes no salary, as he owns a large amount of the stock. The entire control of costs is vested with the cashier. He submits monthly reports. At the end of the year he distributes "receipts" and "expenses" as the following report for two years indicates:\*

#### RECEIPTS—FIRST YEAR

Interest .....	\$54,763.83, or	95.02%
Exchange .....	681.61, or	1.18%
Box rents .....	305.00, or	.53%
Commissions .....	1,158.58, or	2.01%
From charged-off items and refunds .....	728.10, or	1.26%
	<u>\$57,637.12, or</u>	<u>100.00%</u>

#### DISBURSEMENTS—FIRST YEAR

Paid in dividends .....	\$ 7,500.00, or	13.01%
To undivided profits .....	4,972.20, or	8.63%
Net profit .....	<u>\$12,472.20, or</u>	<u>21.64%</u>

#### RECEIPTS—SECOND YEAR

Interest .....	\$57,948.62, or	96.42%
Exchange .....	613.02, or	1.02%
Safe deposit rent .....	312.52, or	.52%
Commissions .....	1,226.05, or	2.04%
	<u>\$60,100.21, or</u>	<u>100.00%</u>

#### DISBURSEMENTS—SECOND YEAR

Paid in dividends .....	\$ 7,218.03, or	12.01%
To undivided profit account .....	5,679.47, or	9.45%
Net profit .....	<u>\$12,897.50, or</u>	<u>21.46%</u>

\*The percentages are accurate. The actual figures are approximated.

## COST OF OPERATING—FIRST YEAR

Salaries.....	\$ 7,849.96, or	13.61%
Printing and office supplies.....	954.76, or	1.65%
Advertising.....	187.55, or	.33%
Postage, telephone, freight and express.....	519.68, or	.90%
Interest on savings and certificates of deposits.....	23,670.63, or	41.08%
Rent, janitor, and heating.....	1,533.73, or	2.66%
Taxes.....	1,681.06, or	2.92%
Bond and insurance premiums.....	407.12, or	.72%
Directors' and attorneys' salaries.....	1,273.25, or	2.20%
Dues and bank examiners.....	270.00, or	.48%
Miscellaneous.....	179.29, or	.31%
Office changes.....	514.99, or	.89%
Posting machine.....	833.00, or	4.44%
	<b>\$39,875.02, or</b>	<b>69.19%</b>
Depreciation and charged off.....	5,289.90, or	9.17%
Percentages are based on total receipts.....	<b>\$57,637.12, or</b>	<b>100.00%</b>

## COST OF OPERATING—SECOND YEAR

Salaries.....	\$ 8,269.79, or	13.76%
Printing and office supplies.....	703.17, or	1.17%
Advertising.....	558.93, or	.93%
Postage, telephone, freight and express.....	480.80, or	.80%
Interest on savings and certificates of deposit.....	23,144.59, or	38.51%
Rent, janitor, and heating.....	1,526.54, or	2.54%
Taxes.....	1,718.87, or	2.86%
Bond and insurance premiums.....	510.85, or	.85%
Directors' and attorneys' salaries.....	643.07, or	1.07%
Dues and bank examiners.....	126.21, or	.21%
Miscellaneous.....	330.55, or	.55%
	<b>\$38,013.37, or</b>	<b>63.25%</b>
Depreciation charged on bonds to the account of profit and loss.....	9,189.32, or	15.29%
Percentages are based on total receipts.....	<b>\$60,100.21, or</b>	<b>100.00%</b>

In this calculation, however, "interest paid" was included under the head of operating expenses, although it does not belong strictly under this classification because the bank, of course, does not really earn the entire amount shown in its gross earnings, but only the difference between the amount received by it for the money loaned and the amount paid by it for money deposited. "Interest paid" is, therefore, more in the nature of the purchase price of the commodity that the bank is selling, and the difference between the total income from all sources and the "interest paid" represents the gross earnings.

That it is important to keep the "interest paid" item separate in determining the percentages of operating expense, investigation clearly indicates. The upper chart in Figure 7, for example, shows the operating expenses in a middle western national bank, based upon the total earnings, less the interest paid. Contrast this with the cost percentages of a small state bank of about \$1,500,000, shown on the same page. In the middle chart the banker has included his "interest paid" in the computation just as some banks do erroneously.

But in the lower chart the "interest paid" item is deducted as it should be and this has enabled him to strike his percentage of operating expense the same as in the upper chart, which shows the operating expense based on total earnings, "less interest paid" to be 55.6%, while the lower one shows that operating expenses calculated in the same way in the small bank are 48.85%. The heavier expense in the big bank is due to administrative costs, taxes and rent.

These percentages of what it costs to run a bank are based upon an investigation made by SYSTEM, the Magazine of Business—the first investigation of its type ever made. The percentage tables covering the operating costs of different types of banks in different sections of the country will be found on pages 208 to 222. The percentages are not advanced as final but rather as indicative, and as such they present a sufficiently accurate standard of operating costs to make comparison with your own figures interesting and worth while.

## CHAPTER III

### HOW A CLASSIFICATION OF YOUR COSTS CAN CHECK PROFIT LEAKS

**T**HE moment I have to ask 'what is it?' about any record, that record usually is wrong," declared a state bank examiner interviewed during the investigation into bank cost problems that preceded the publication of this volume. "Loose and indefinite records often lead to misunderstanding and help to create embarrassing situations. This is especially true in cost finding."

Methods of classifying and distributing costs so that no one has to ask "what is it?" range from simple single sheets used in "one-man" banks to the more extensive forms and time-saving plans used in metropolitan banks.

Yet, in 75% of the country's banks—the so-called country banks—a definite method, built up along the lines of those described in the pages that follow, can be used. In providing for the classification of costs, it is, of course, essential to avoid any process that requires unnecessary bookkeeping or consumes too much space in the record.

"Up to a few years ago we used a stock form of expense book," said the cashier of a country bank in Michigan, "and, while it helped us to keep track of our costs, it was cumbersome to handle. I decided to eliminate this book and to substitute a looseleaf system. This enables me to give a more satisfactory report to my directors and it helps also to make effective comparisons."

The method used in his bank can be used by banks of almost any size, and when it is systematically carried out, usually will reveal at a glance the receipts and disbursements for monthly, quarterly, semiannual, and annual periods. The expense of operation in this bank is approximately 1.5% of the deposits of \$750,000 and the periodical statement of costs provides an accurate check for detecting an increase on any of the items of overhead or in the item of "interest paid."

All the expense is distributed monthly. For example, the item of insurance and bonds as shown in the monthly report blank (Figure 9) may amount to \$250 for the year and may be paid in one lump sum. But in the costing it is distributed over the year by months on the basis of one twelfth and thus the costs are clearly balanced from month to month.

When any of the items located in the report sheet show as an extraordinary increase, an explanation from the cashier accompanies the report. In this way the directors have a definite line on every form of expense. The monthly cost reports are kept in a separate file. At the end of the quarterly period, the aggregate costs for the three months are figured on a larger sheet, but otherwise exactly like that in Figure 9, and so on for the semiannual and annual period.

Now the advantage of this method is that the expense for any given period can be quickly determined by reference to a single sheet which, obviously, can be handled easier than a bound book. Moreover, the classification of the expense over four periods in a year furnishes a ready means of tracing any particular item with the least effort.

"The expense of operating this system is negligible," says the cashier. "Only 100 blanks are needed. I have found this plan vastly superior to the old-fashioned book form because I can compute my costs over different periods by simply taking a few cost reports

# MONTHLY REPORT FOR \_\_\_\_\_ 191\_\_\_\_\_

DISBURSEMENTS												
Rent and Heat												
Light and Water												
Taxes												
Salaries												
Furniture and Fixtures												
Postage												
Express and Freight												
Stationery, Printing and Supplies												
Insurance and Bonds												
Advertising												
Telephone and Telegraph												
Miscellaneous												
Interest Paid on Certificates												
Interest Paid on Bank Accounts												
Accumulated Interest Paid												
Total												
RECEIPTS												
Interest on Mortgages												
Interest on Notes												
Interest on Reserve Balances												
Discount on Notes												
Discount on Sale Notes												
Exchange												
Protest Fee												
Total												
Less Disbursements												
Net Earnings for the Month												

Figure 9: Classifying the disbursements like this helps to simplify the problem of keeping an accurate record of the costs of doing business. It is made out monthly by the cashier, and submitted to the directors. The figures are summarized quarterly.



**Figure 10 (front):** This summary of expenses in two sections indicates how burdensome the work of keeping costs has been for an Indiana bank which itemized everything by columns on the one sheet.

**Figure 10 (back):** This shows how provision was unnecessarily made for many items that do not require monthly attention. The form contrasts strongly with the simple method set forth in Figure 9.

and laying them out before me instead of thumbing over a big volume."

It is worth while contrasting the method with that of a small Indiana bank which has used a cumbersome stock form. This plan of distributing costs, investigation indicates, is used in a large number of small banks. The forms are 18 inches long, 9 inches wide, and are bound 150 in a book. They are printed on heavy ledger paper and ruled vertically and horizontally. When this book is opened it is 38 inches long and naturally it occupies much unnecessary space and is extremely awkward to handle. It covers a great many items that go to make the task of cost accounting more intricate than it should be. For example, there are 43 headings which can properly be condensed into one quarter that number, thus simplifying the problem of classifying the costs (Figure 10). Of course, it is essential in a sound cost-finding system to embrace every expense detail, but often there is a temptation to make the classification so unwieldy that it unfortunately defeats its own purpose.

A WORKABLE COST SYSTEM SHOULD NOT BE HANDICAPPED  
BY TOO MANY SEPARATE ACCOUNTS

Now let us examine these items. In many small banks the positions of president and vice-president are largely honorary. These officials receive no salaries. They get a fee for attendance at the directors' meetings and, as they usually are stockholders, they of course often receive dividend checks. The first two items, therefore, are unnecessary. There are other items also which do not require a specific place on the cost sheet, as, for example, the numerous sundry items of ice, janitors' supplies, cleaning and the like.

The banker who uses this cumbersome system finds that many details under its classification are not worth while setting down.

Figure 11: This form, investigation indicated, is one of the most effective methods of classifying costs, since it shows, at a glance, the development of the business as well as the gross earnings. On the reverse side are shown vital facts regarding depositors' accounts.

**Figure 12:** This form—really an extension of Figure 11—summarizes the deposits in the different departments and provides a comparative year-to-year record, including accounts opened and closed. It thus furnishes a quickly available barometer of the banker's business.

"We buy no ice, we have no yard to clean up, we have not found it necessary to clean the locks of our safety deposit vault since it was installed," he says. "Therefore we pay no attention to these items as listed or to several others on the sheet."

"Then why do you use it?" he was asked.

"Simply because I started to use it 10 years ago and I was quite enthusiastic about it for the first few years," he answered. "I realize now that it means a lot of detail that is of no value to me or to the directors, but I just keep on using it because I do not know how other banks are finding their costs or whether they have improved upon my ineffective system."

To be effective any plan of classifying and distributing costs must, of course, be developed to fit the particular problems of the bank concerned. Thus, in preparing to classify his costs, the banker first should analyze his costs with relation to all of the various important factors which influence the expense, such as the reserve, the items, the loans and discounts, and so on. This is highly essential in all banks, but the majority of small banks, investigation indicated, usually fail to link up the operating costs to other factors that bear directly on operation.

A national bank in the South, with deposits of \$5,800,000 of which about 60% is checking and 40% is time, has worked out an effective plan for distributing earnings and disbursements on one sheet, at the same time tabulating the condition of the business in the various departments (Figure 11). Under the heading "average deposits," for example, is included the monthly total of the various kinds of deposits, together with the "average loans and discounts" and the "average reserve"—items that must be watched carefully in determining costs. Space is left, too, for the "gross earnings," the "disbursements," and the "percentage of disbursements to the gross earnings."

On the reverse side of this sheet a monthly record is made of the "individual accounts" and "savings accounts." Under this heading is noted the number of opened and closed accounts and the gain or loss and the average total of new accounts. This makes a valuable record of the trend of the bank's business.

Using this method of finding costs, this bank determined its cost of operation, figured on the basis of average deposits, capital stock, and surplus earned.

By putting in the first column below the results as figured on the basis of average deposits per \$100, and in the second column those figured on the basis of average capital, surplus, and undivided profits per \$100, the findings for a recent year were as follows:

**COST OF OPERATING BY PERCENTAGES**

Salaries.....	0.759	2.03
Stationery and supplies.....	0.097	0.26
Advertising.....	0.063	0.168
Postage and telephone, telegraph and express.....	0.096	0.257
Maintenance of building.....	0.096	0.258
Insurance, legal, sundries.....	0.097	0.259
	<u>1.208</u>	<u>3.232</u>
Taxes.....	0.65	1.743
Exchange.....	0.029	0.076
Interest, savings.....	1.166	3.112
Interest, bank.....	0.251	0.671
	<u>3.304</u>	<u>8.834</u>

It is interesting to turn to the actual total results arrived at in determining the gross revenue and disbursements. The tabulation given on page 34 will show exactly how all of the expense and income was distributed. There are, perhaps, some items that require explanation. For example, the item of real estate represents a building, other than the one occupied, that is owned by this bank. In the state in which this bank is located, bank stockholders are subject to a tax, an item included here which does not appear in the cost findings of banks in some states. The distribution is shown on the following page:

## FINDING BANK COSTS

## GROSS REVENUE

## Percentage of Gross Earnings

Interest.....	\$260,112.12, or	80.90%
Collection and exchange.....	6,573.90, or	2.04%
Rents—bank building.....	16,823.57, or	5.23%
Real estate.....	4,625.00, or	1.50%
Profit and loss.....	16,938.27, or	5.25%
Reimbursed by shareholders for taxes.....	15,419.93, or	4.80%
Reimbursed for expense account.....	356.97, or	.12%
Balance reserved for taxes.....	492.91, or	.16%
Total.....	\$321,342.67, or	100.00%

## DISBURSEMENTS

## To Dividends and Undivided Profits

Paid in dividends.....	\$ 60,000.00, or	18.67%
Placed in undivided profit account.....	38,284.14, or	11.91%
Surplus.....	75,000.00, or	23.34%
Total net profits.....	\$173,284.14, or	53.92%

## Cost of Operating

Paid in salaries.....	\$27,151.38, or	8.44%
Stationery, printing, supplies.....	3,466.99, or	1.07%
Advertising.....	2,251.47, or	.69%
Postage, telephone, telegraph and express.....	3,434.00, or	1.06%
Interest on savings accounts.....	41,583.16, or	12.93%
Interest to banks.....	8,967.01, or	2.96%
Operating and maintenance of building including janitors.....	3,445.21, or	1.06%
Taxes.....	23,286.75, or	7.24%
(Shareholders.....)	\$15,419.93)	
(Bank.....)	7,866.82)	

Insurance.....	\$ 212.50, or	0.06%
Sundries.....	3,944.21, or	1.22%
Amount charged to profit and loss.....	18,745.56, or	5.82%
Legal department.....	2,009.14, or	.62%
Brown Block.....	2,599.51, or	.80%
(Taxes.....)	\$1,401.85)	
(Repairs.....)	88.58)	
(Insurance.....)	20.00)	
(Profits to part owner.....)	1,039.08)	

Dues.....	\$ 318.50, or	0.08%
Equipment, including machines.....	1,574.94, or	.48%
Bankers' Service Corporation (soliciting accounts).....	1,056.94, or	.32%
Exchange.....	1,023.23, or	.31%
Interest and refunds.....	2,988.03, or	.92%
Total cost of operation.....	\$148,058.53, or	46.08%
Grand total disbursements.....	\$321,342.67, or	100.00%

The item "interest paid," it will be noted, is included under the head of disbursements, although, as previously indicated, it would not be considered in determining the actual operating expense.

In much the same way as it determines the operating expense and other pertinent items as shown in Figure 11, this bank keeps a daily record of the deposits, the new accounts opened, and accounts closed. All of this information is tabulated on a sheet as in Figure 12.

It is important in all banks to determine what kind of an account the customer carries because this has a direct relation to the still more important problem of item cost which will be taken up fully in Chapter IX.

A history of the deposits easily can be made showing the increase or decrease from year to year and with this the banker is able to control item cost more effectively than if he had to depend entirely upon his memory or to make a tedious examination of the ledgers from time to time. It is needful, therefore, to record the general facts relating to deposits so that they will be accessible for other data, such as the individual average balance, the date opened, the nature of the business, and so on.

Every account that a bank accepts has a direct influence on profit and loss. While the banker aims to serve the public he certainly cannot long do so at the expense of the capital which has been invested by his stockholders. In order to receive proper compensation for the valuable service that the bank gives to the community, it is essential to know the costs of doing business and to so classify them that causes of loss may be promptly detected and removed and sources of profit readily encouraged.



## CHAPTER IV

### MAKING EACH DEPARTMENT BEAR ITS SHARE

**W**ITHIN six months after it opened, a state bank in the Northwest had deposits of more than \$1,000,000. This bank was backed by some of the strongest men in its community. As it approached its first birthday, the board of directors decided to make a detailed audit to find out the departments that were profitable and those that were not. This examination revealed that the farm mortgage department had lost \$2,885.25 and the real estate department \$122.74.

In determining this loss the examiners divided the business in each department into different classifications. In the real estate department, for example, the total monthly business was listed under the headings "commission on loans" "commission on real estate," and "commission on insurance," with indications also of the number of loans and the number of sales made. Directly below this classification appeared the distribution of the direct expense, such as the salaries of the employees in the department, the advertising, the supplies, and so on.

Since the analysis of the business on this careful basis showed a loss, the officers decided it was unnecessary to dig into the loss further by distributing the administration expense, rent, taxes, and insurance. In the farm mortgage department, the income was determined on the basis of cash commissions and accrued interest commissions and the expense was charged off as in the real estate department.

This steady loss was chiefly due to the high cost of operating the departments in question and to the sharp competition from other banks, all of which made the situation look black when each activity carried its share. However, the bank was a new one and not many new banks show a profit in the first few years. The examiners, of course, took this fact into consideration when they were preparing their report.

They decided, however, to recommend that the farm mortgage department be discontinued until the bank could create a heavier demand for this class of paper and thereby make it possible for the department to carry its fair share of the expenses profitably. When the expense caused by this department was eliminated, the bank was able to devote greater effort to the profitable commercial and savings departments, and the campaign that followed for new business in these branches greatly increased the deposit line.

In any bank it is vitally necessary to keep a close check on the activity of the various departments, investigation indicated, to see that the burden of expense is being fairly carried. As was true in this bank in the Northwest, one, or even several departments may be a drawback to others, and unless these losing departments are quickly determined, hidden drains may develop into heavy losses.

In any bank with more than a commercial and savings department and a safe deposit vault—and there are many small banks doing a real estate, insurance, farm loan, and trust business—it is essential to prorate the interdepartmental expenses so as to allocate burdens fairly. The plan of one southern bank illustrates how this can be done effectively. This bank distributes its expenses on one key ratio, which was found by making an examination of the amount of business done by each department, together with a close determination of the income, the disbursements,

and the profit and loss in the respective departments over a certain period. This analysis also embraced the distribution of interdepartmental operating expense such as salaries, light, power, rent, and taxes.

The farm loan and real estate departments keep their own books, and pay all their operating expenses directly out of their own receipts. They make purchases of furniture, stationery, and supplies through a publicity and purchasing department and are billed by that department monthly for costs on direct requisitions and also for the cost of advertising devoted entirely to their special fields.

USUALLY, OVERHEAD CHARGES SHOULD BE PRORATED  
AGAINST THE VARIOUS DEPARTMENTS

General company overhead, such as rent, light, heat, telephones, and so on, is prorated on a unit ratio. The farm loan department pays 6% of this charge, and the real estate department 7%.

Neither of these departments has any working capital in the strict sense of the word, but each has a fund of \$25,000 to facilitate its loans, so that when it turns over a loan to the banking department it simply sells at par a loan which it has already made. Neither department is charged with interest on the \$25,000 fund credited to it for operative convenience, this fund being really a book credit, not a working investment.

The farm loan department's sole source of revenue is commissions from loans and its expenses are salaries, supplies, advertising, pro rata of overhead, and so on.

The real estate department, in addition to commissions on loans, has commissions on rent collections, and commissions on sales.

"We analyzed each item of business," says the president of this bank, "and when we secured the results in dollars and cents, we decided the proportion of it which benefited each department. In analyzing the

departmental business we checked the income over a given period, as well as the entire cost of operation. Then we established a key ratio that applied to all the departments and this ratio has been found to work out satisfactorily as an apportionment of expense to each department. The key ratio is checked and readjusted when necessary by a new compilation of individual ratios after the method already described. The present key ratio which has been in use for more than a year is as follows:

Financial department.....	50%
Trust department.....	18%
Bond department.....	10%
Real estate department.....	7%
Safe deposit department.....	9%
Farm loan department.....	6%

This distribution does not take into consideration the possible importance of the business of one department to others, but simply treats the expense compilation as a purveyor of the various expense items to the departments, charging them for what they actually get. In distributing the expenses on this basis, Figure 13 illustrates the operation of the plan.

Often a department is maintained at a loss because of business that it brings to other departments, investigation indicated. In many national banks, the savings department does not produce a profit, it was found. Not long ago, for example, a national bank in Ohio launched a big drive for savings accounts. The campaign consisted of personal solicitation for \$1 accounts, aided by the distribution of miniature banks. It cost \$1,700 to produce 2,400 accounts amounting to \$3,300 in initial deposits. After the campaign closed it was found necessary, however, to carry out a program of educational publicity in order to keep the depositors interested in saving regularly. This educational campaign cost more than \$500 in



October 1917

TATION- ERY	FUEL	LIGHT AND POWER	LIBRARY	POSTAGE	FURNITURE AND FIXTURES	GENERAL	DEPART- MENT TOTAL	CHECK TOTAL
		80					F 80	
		39					T 39	
		16					B 16	
		11					R 11	
		14					S 14	
		89					FL 89	159
							F 75 00	75 00
450					42 00		F 45 00	45 00
			2 00				T 42 00	42 00
				2 00 00			B 2 00	2 00
							R 2 00	2 00
						5 00	F 5 00	5 00
	50 00						F 50 00	
	18 00						T 18 00	
	10 00						B 10 00	
	7 00						R 7 00	
	9 00						S 9 00	
	6 00						FL 6 00	10 00
450	100 00	159	2 00	2 00	42 00	5 00	250 09	250 00

officers have an important grouping of information to guide them in watching cost trends. Departments, it will be noted, are designated by letter and the form includes spaces for the date, the check number, the payee, and the complete details of checks paid for expense items.

six months and in that time the deposits were increased to more than \$40,000, but the expense of opening these accounts, combined with the labor and stationery charge, and so on, actually made them unprofitable.

Despite the fact that this condition frequently results in a loss in the savings department, investigation indicated that many bankers do not figure the value of a savings department solely upon its book profit and loss showing. It is sometimes difficult to get prospects to change established banking connections, and without a savings department often is not easy to make an effective appeal.

With a savings department the bank can form connections with a large number of prospects and it may be reasonably sure that a certain percentage of these will develop into profitable customers for other departments. Thus, the direct and intangible advantage of the savings department, in many banks, is held to offset the monetary loss that it causes.

That a savings department usually is worth while is clearly indicated by the investigation involved in the preparation of this volume. The condition in one southern bank, for example, which is typical of many other banks, indicates that taking it over a long period the savings account is almost always sure to show a profit. The typical savings account in this bank amounts to \$200. Its life is seven years. The percentage of the gross earnings on the total assets employed by the banking department in a recent year was 4.49%. On this basis the gross earnings on the average savings account during its seven years would be \$69.15. Of the total assets employed by the financial department an average of over \$5,500,000, or about 18.4%, was held as cash and exchanges.

"When we consider that no legal reserve is necessary against savings deposits," says an official of this bank, "and that 100% of them were employed, the rate of

earnings on that part of our assets would be 5.32%. In approximating the earnings it seems fair to assume that 90% of total savings deposits could be invested, and if earnings were 4.49% on total funds, when 81.6% of them were invested, earnings would be 4.49% on that part of them of which 90% could be invested. This approximate calculation would give the total earnings from an average savings account as \$76.076.

"The interest, not including the advertising amounted to 2.78%. Other expense chargeable to the savings department amounted to \$32.675, or \$1.307 per account. In seven years this would amount to \$9.149. Last year the bank spent in advertising \$2.24 for each new account secured. On this basis, expenses in connection with an average savings account (balance \$220) would be:

Interest for 7 years at 2.78%.....	\$42.82
Running expenses.....	9.14
Advertising.....	2.25
Total.....	\$54.21

"According to the first method of figuring gross earnings the net profits of a savings account over the period would be \$69.15 minus \$54.22, or \$14.93.

"A profit of \$14.93 during its seven years' life would be an annual profit of \$2.13 on each account, or an annual net profit of something over \$53,000 on 25,000 accounts.

"If, however, we figure gross earnings on the basis of investing total savings deposits we have \$111.93 minus \$54.21, or \$57.72—an annual net profit of \$8.25 per account, or a total of \$206,000 on 25,000 accounts.

"The third basis of calculation, which supposes that 90% of the savings deposits would be employed gives \$76.08 minus \$54.21, or \$21.87—an annual net profit per account of \$3.12 or a net profit annually of \$78,000 on 25,000 accounts."



Of course, the cost of getting new savings accounts and the further cost of holding them, combined with the losses caused by withdrawal, the expense of stationery, and so forth, is certain to influence the productivity of the savings department. This question is taken up more fully in another chapter. But the calculation already given, based upon conditions in one bank, may be taken as fairly indicative of what a savings department can do in the way of increasing earnings while having a fair share of expenses when it is backed up by progressive management.

DEPARTMENTS SHOWING THE GREATEST RETURNS SHOULD NOT  
NECESSARILY CARRY THE BIGGEST COST CHARGES

Let us turn now to the profit and loss problem in the commercial department as it reflects on the fair sharing of the burden of expenses. Since the general sources of a bank's profit are the loan of its capital and the loan of its deposits, it is essential that the banker establish his interest charges on a systematic and logical basis. Investigation indicates that the commercial department absorbs most of the expense in the general run of banks, because it produces the greatest profit. But it is true also that in many banks the commercial department often causes loss. This condition usually is due primarily to the payment of interest on balances, when the actual loanable balances have not been accurately established. Loss often is due also to failure to get a profitable rate on loans.

"If a customer maintains 20% of his loan as a balance in a non-interest-bearing checking account, we make him a 6% rate during the life of his loan. If his balance on our books shows an average of 10% we charge him 7%; to borrowers who maintain no reasonable balance whatever, we charge 8%."

This is the way a country banker in the West summarized a plan which he has adopted in order to

solve the problem of what interest rate to charge on loans. It is in reality a sliding scale based on average balances and while these rates may appear to banks in different localities as too high or too low, they, of course, may be satisfactorily adjusted up or down as occasion or locality demands.

In almost all banks, high-risk notes bear a high rate of interest and what are considered "sure" notes carry a much smaller rate. The problem, of course, is to work out a satisfactory rule that will both be fair to the bank and fair to the borrower.

The sliding-scale plan employed by the western banker mentioned above is simple enough to be adapted in any type of bank and when it is prudently enforced it is nearly always certain to produce profitable results. Let us consider how it operates. One firm, for example, called at this bank and wanted to renew its loan of several thousand dollars for 90 days. The credit of this firm was high, but it carried its checking account at another of the local banks.

"When they told me they wanted to renew this note I gave them an outline of our sliding scale policy," said the bank president. "The head of the firm didn't like it and he didn't conceal his disappointment when I hesitated about the renewal."

"Do you mean that you want to charge me 8% for this loan?" he asked.

"The loan is going to cost you just whatever you want it to," I replied. "I'm willing to leave that entirely to you. If you carry an account with us equal to 20% of the amount of this loan we will make you a 6% rate. If you do not care to carry any account with us it will put you in the 8% class, in accordance with our policy."

"That certainly seems to be fair enough," he said after studying for a moment," though I had not thought of it just that way. I cannot arrange to open

an account here immediately, so this time I will have to give you a check for the other 2%."

After accepting the check and granting the renewal, the banker went on to explain the reason for the sliding scale. To make it more clear to the customer, he showed that it was the policy of the bank to increase its deposits as it increased its loans, in order to maintain the proper ratio between them so that the bank could be operated to its full earning capacity.

By employing a sliding scale of rates of this sort a bank usually builds a reputation for taking care of its steady customers at the lowest prevailing rate and it also gains the advantage of always having money to meet customer demand promptly, investigation indicated. The importance of this asset cannot be underestimated because, if a banker has to turn down a borrower, he may seek and obtain a loan at a competing bank and thus good will may be sacrificed.

The problem of what rate to charge on loans so that a fair burden of expense will be carried is, without question, among the most vital and most perplexing. In national banks it is especially difficult of solution on account of federal restrictions. But, since national banks comprise only 25% of the banks of the United States, 75% enjoy wide latitude in adjusting this rate factor.

Investigation indicated, for example, that in many of the banks, other than national, in the West, the Middle West and the South, the maximum charged on loans was from 10% to 12%. The average was from 8.3% to 9%, and the minimum was from 6% to 6.3%. In the East the rate seldom was found to be above 7%.

"We make hundreds of small loans during the course of a year," said a state banker in Indiana, "and our minimum charge is 50 cents. This policy has enabled us to make a profit. We have hundreds of applications for loans of less than \$50 for from 30 to 90 days, and if we were to charge only the usual 6% or 7%

rate, they would be a cause of loss. One day not long ago I had 17 applications for these small amounts. The borrowers were good, and were willing to pay our rate. This day's loans produced \$8.50 in revenue, while, if figured on a straight interest rate, they would not have produced half that amount."

Since 1904, a small middle western banker, recognizing the need of controlling his interest problem, especially in relation to the commercial department, has made a semiannual computation in order to arrive at the average interest paid and the profit. His object is to be able to allocate a fair share of expenses to the commercial department and still have a fair profit left. This record is bound in book form, and his showing for two years (which follows) illustrates his method of keeping track of a vital banking factor:

## INTEREST AND EXCHANGE COLLECTED

	Loans	Interest collected	Exchange collected
First year			
January to July.....	\$551,580	\$14,503.84	\$342.12
July to January.....	589,200	17,249.97	400.88
Second year			
January to July.....	865,038	23,069.13	260.63
July to January.....	849,402	25,136.83	313.82

## SUMMARY BY PERCENTAGES

	Percentage of interest	Yearly average interest	Percentage of average interest paid	Percentage of profit
First year				
January to July.....	5.24%			
July to January.....		5.54%	1.94%	3.60%
Second year				
January to July.....	5.32%	5.84%		
July to January.....	5.92%	5.62%	2.06%	3.56%

"This interest tabulation is one of the main checks on my business," says this banker." It is just as necessary to keep this record as it is to keep down the costs. By referring to the record from time to time, I am better able to judge existing conditions and to meet them more effectively."

## CHAPTER V

### WHAT DOES IT COST TO OPEN AN ACCOUNT?

**I**N a southern city, where competition among the banks for new business is very keen, the cashier of one bank estimates that it costs 28 cents to put a new savings account on the books, while the cashier of another bank across the street places the figure at \$1.50 to \$2.10.

This widespread disparity is characteristic, investigation indicated. The difference is even more marked between commercial departments, because of the great variety of methods used in developing this class of business. Some commercial banks, for example, spend a great deal of money in soliciting country bank accounts. Others go after certain lines of commercial business, and still others canvass certain districts hard and consistently.

Competition of this type among banks, the development of financial advertising, and the increasing tendency toward the solicitation of accounts, compel greater attention to the problem of finding the cost of opening accounts. The handling of accounts is, of course, the main reason for banking machinery, and the problem therefore deserves the most careful attention.

Many banks, it was found, pay interest on balances that are too small to show a profit when the interest is credited. There is often a temptation to build up a big deposit line that will produce no net income. It is necessary in all banks to know what sort of an account depositors carry, to ascertain the relation of one depositor to the other depositors, and to determine the indi-

vidual balances. This cannot be done by depending upon memory or upon guesswork.

Since the main sources of the bank's profits are the loan of its deposits, and since the deposits consist of the accounts, it naturally follows that it is essential to keep tab on the cost of opening new accounts, as well as handling them after they are opened.

Let us turn first to the savings department. The account cost here can be easily computed by dividing the total cost of the advertising by the number of new accounts secured. In making this estimate, it is the practice of a national bank which has a large savings department to compute it monthly.

This computation has revealed that the cost in the winter months is about 30% lower than in the summer months, due probably to the fact that the public is not so responsive in the hot season. In this bank it is found also that there is a noticeable variation in extremely cold weather, evidently because prospects wait for a more favorable opportunity to go to the bank, and, meanwhile, the advertising message that is intended to develop a new account is forgotten and the process of working the prospect up to the selling point must be repeated. A record covering five years in this bank shows that the average cost of opening a new savings account is \$1.65.

In the commercial department of this bank, as in many other banks, the problem of estimating the account cost is more difficult.

"In addition to newspaper publicity and direct-by-mail work," says an officer, "we have to do a great deal of personal solicitation and good will advertising. It would be possible to keep an accurate account of all funds expended through the two last named channels, but it would be a very tedious job. For example, I played golf with a man for two years, whose firm has recently had its name placed on our ledger. I never

once asked this friend for his account, but I should not like to say just what this account cost me, either on the course or around the nineteenth hole. In another instance I sent a representative to a neighboring city to solicit an account which carries a balance of \$20,000, and the expense immediately incident was \$21, but I have no way of knowing what percentage of the expense previously charged up by our traveling representatives in that territory could be properly chargeable to this account, although I've no doubt the work of cultivation was long in process.

FINDING OUT WHAT IT COSTS TO GET NEW ACCOUNTS DEMANDS  
CAREFUL ANALYSIS AND OFTEN PERSONAL INQUIRY

"Furthermore, there is not a day passes but that officers of the bank write a number of letters to old customers, thanking them for directing new business our way. Such accounts reduce the account cost. It has been an invariable rule with us to steer clear of anything that smacked of business-buying. We would not spend a dollar just for the satisfaction of lifting an account; in fact there is no such satisfaction. Furthermore, we do not advocate working on a prospect who does not give promise of a profitable account."

To find out exactly what its new accounts are costing, a Western bank keeps a complete record in a single book used especially for all expenditures for advertising and new business. The plan requires also that the tellers keep an accurate daily record on cards of all the new accounts received, the size of the account, and the reason given by the new depositor for selecting the bank. Thus the bank finds it easy to determine what each medium costs to operate and what proportion of all the business secured can be credited to the use of that particular medium. The tellers periodically—say over a week or so—ask depositors opening accounts what influenced them to come to the bank.



**Figure 14 (the old way):** These two views taken in the First National Bank of Cincinnati show graphically the transition from the old pen-and-ink accounting routine to the modern way of putting work through.



**Figure 14 (the new way):** This arrangement in contrast to the old one pictured above enables the bank to handle 30% more work with a greatly reduced force of clerks, and eliminates crowding employees together.



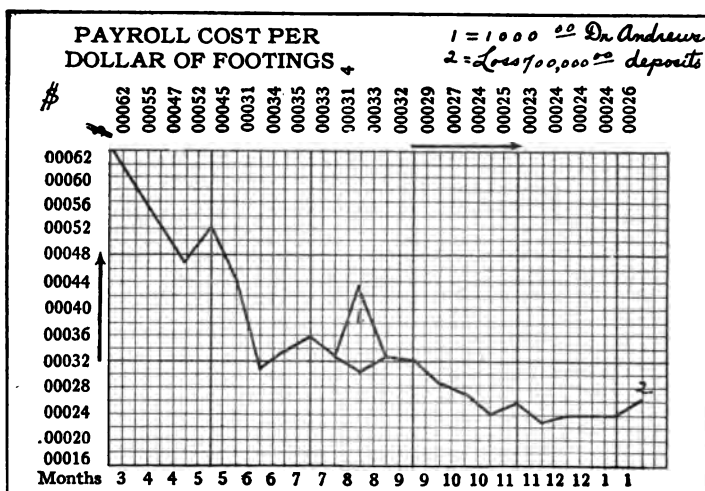
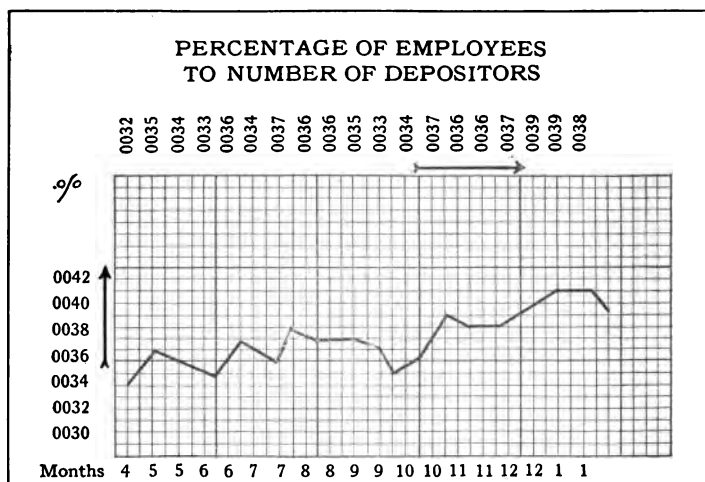


Figure 15: The time-saving method by which one bank compares the total footings of deposits in dollars and the payroll in dollars to keep track of increasing costs. This is described on page 54.



## NEW ACCOUNTS AND WHAT THEY COST 53

Not long ago this bank found that 67% of the new depositors in a given period came to the bank on the recommendations of friends and pleased customers. Thus, in this particular instance it was simple to find out just what this business was costing, as it required only dividing the number of accounts into the cost of maintaining the service of the bank.

In a recent year this same bank secured 18,000 new accounts in the savings and commercial department at an approximate cost of \$25,000, or about \$1.30 each. This amount, investigation indicated, is lower than the cost in many other banks. A Pennsylvania bank, by way of comparison, estimates in the same way that it costs \$3 to secure a new account, a New York bank that it costs \$5.30, an Ohio bank that it costs \$4.80.

Yet these are only a few of the details that must be considered in the cost of an account. They do not anticipate the cost of handling the items once the account is placed on the books, a subject that is fully covered in Chapter IX.

The number and the activity of the accounts naturally influences the cost of the bookkeeping. A medium-sized state bank in the Middle West made an investigation and analysis of the cost in the bookkeeping department, to find out the direct payroll cost on each posting and the men who were doing the lion's share of the work. This investigation, covering eight days' work, developed these results:

Check postings, ledger and statements.....	38,746
Credit postings, ledger and statements.....	8,210
Total.....	46,956
Average postings per bookkeeper, 8 days.....	5,869
Average per day.....	734
Most postings 8 days, one man.....	8,039
Daily average of those doing the most postings.....	1,011
Least postings (8 days, one man).....	5,690
Daily average of those doing the least postings.....	710
Direct payroll cost of each posting.....	\$0.0026
Departmental payroll cost of each posting.....	.00415

One of the bookkeepers on this work received \$40 a month, four received \$60; one received \$65, and two received \$75. The analysis showed that the \$65 man made the most postings, 8,039, while one of the \$75 men made the least, 2,166, although the other \$75 man made 7,017. The youngster holding down the \$40 job was in fourth place with 6,019 postings, and the others were considerably below him.

In this bank also the problem of keeping a close check on the accounts went farther. Two graphs were prepared by the chief clerk in order to show the activity of the accounts from day to day and the cost (Figure 15 and Figure 16).

Figure 15 is a comparison of the total footings in dollars, and the payroll in dollars, and presents a fair basis for comparison.

Figure 16 indicates the number of employees and the number of depositors, and uses the percentage between them as a basis for determining the cost trend.

The figures at the top of Figure 15, reading from left to right, represent the cost per dollar of footings for handling the business so far as the payroll is concerned, and this cost is figured every 15 days. This cost, of course, bears directly on the number of accounts handled and their activity.

The figures at the left, from the bottom up, represent the scale of even divisions of 0.00004 of a dollar, upon which the chart is drawn.

The figures along the bottom of the chart represent the number of the months of the year. It will be noted that, except at the beginning, each month has two figures—representing the payroll every 15 days.

The figures in the upper right-hand corner originally written in red ink are explanations for the two periods on the chart that need explanation. The first, for example, represents a back payment of a large amount on salary which, of course, throws the average of the

figures out, and so they have been charted both ways, with the \$1,000 included and an explanation attached, and with the \$1,000 deducted but charted so as to show the actual trend.

Figure 16 explains the rise in the figures at the end of the period. It is interesting to note the continued downward trend of the chart, which seems, however, to become more stabilized toward the last. This was due to the fact that it was necessary for this institution, as a comparatively new bank, to employ more persons to start operations than the business transacted really warranted. As the business increased it was not necessary to increase the payroll, as the chart indicates. Figure 16 is based on percentages—not dollars—and the figures reading from left to right along the top represent the percentage of employees to the number of depositors at each payroll. The figures at the left, reading from the bottom up, represent the scale upon which the chart is drawn.

DOES THE NUMBER OF EMPLOYEES HAVE ANY DIRECT  
BEARING UPON THE LIST OF DEPOSITORS?

It is also worth while to note that this chart is a great deal more stable than that of dollars of deposits and payroll. While the chart shows some variation in its actual drawing, the figures themselves, if you compare the percentages all the way through, only vary from a low mark of 0.0032 of 1% to a high one of 0.0039, which, although it is a small variation, shows plainly because the scale used is so fine. Thus there appears to be a more constant relationship between the number of depositors and the number of employees than there is between the dollars of deposits and the dollars of payroll.

Usually the banker's definition of a bank account excludes Christmas savings clubs and all accounts of a temporary nature. These accounts cost all the way

from 15 cent each to \$1 to get, investigation indicated, and they are fully discussed in the volume of this series devoted to advertising and service. It is not difficult normally to secure many small temporary accounts, but they have a decided influence in increasing the cost of labor and supplies. But, while these accounts undoubtedly represent a loss for a long time after they are opened, they usually are not as costly as the commercial account which is either too small or too active. It is therefore necessary, for reasons which are taken up in following chapters, that the bank keep an accurate and constant check on the cost of all new accounts.

## CHAPTER VI

### MAKING ACCOUNTS SHOW A PROFIT

**T**HE biggest problem I know of in bank cost accounting," said a Detroit banker recently, "is to get the typical country banker to realize that he is giving service to his depositors which represents a cost to him. It is only fair that depositors should recompense the banker for the expense he is put to in connection with their accounts."

Investigation backed up this banker's assertion and indicated that hundreds of country bankers appear to be under the impression that so long as a customer has a credit on the books sufficient to cover his checks, his is a satisfactory account. Sometimes these bankers evidently do not even give consideration to the question of whether or not the credit represents a collected balance.

The country banker realizes, of course, that his city correspondent will require payment for the time necessary to collect items which are sent in for credit (see Chapter IX), but usually does not attempt to apply this same good-business method to his own customers.

That he does not is traceable principally to the intense competition in many towns for new business, which has already been discussed in the volume devoted to advertising and service. The small banker, investigation indicated, in many instances seems to think that he must accept any kind of an account or deposit that is handed to him.

Often unwise competitive methods can be quickly and satisfactorily corrected by cooperation among the

bankers of a community. When this is done it is easier to determine what rate of interest profitably can be paid to depositors and what charge, if any, shall be made for the expensive services that many banks now are furnishing free.

Not long ago the presidents of four banks in an eastern city met to talk over a uniform interest rate and a charge for certain services. It was only a short time before that one of the banks, a newly organized institution, had come into the field offering to pay 4% interest on savings deposits. This appeal naturally attracted a great deal of business, because the prevailing rate in the city had been 3%. After the 4% banker passed the first interest payment period he discovered that the business was costing him too much, and he became willing to reconsider his action. So the conference was held and after careful analysis of conditions, a rate of 3%, all any of the banks could consistently pay, was agreed upon.

With the interest problem safely out of the way, the four bankers turned their attention to a service charge. Each admitted that he held accounts which resulted in absolute loss, but he was afraid to eliminate them because he felt that, with the stiff competition existing the unprofitable depositor would walk out with a grudge and possibly carry not only his own account but others as well to another bank. So these bankers decided to issue a notice to all their depositors. This notice read:

Accounts with small balances often are conducted at a loss to banks, owing to the increased expense of furnishing deposit slips, check books, and the like, and the labor of looking up checks, putting them through the books, maintaining files, paying return postage, and so on.

Accordingly, it has been determined that on and after September 30 a service charge of 50 cents a month will be made on all accounts which do not on the preceding month show a daily balance of \$100 or more.

To savings accounts, payable on presentation of pass books, and to certificates of deposit, this rule will not apply. Savings accounts are welcome in amounts of \$1 or over.

Should the service charge be necessary, a slip will be made out and will be placed with your checks and returned with your vouchers and statement.

These bankers, like hundreds of others, had previously depended for a large part of their revenue upon the exchange charged in remitting for checks drawn on them by their customers. As long as a customer did not have a large number of checks, they felt the exchange profits were sufficient compensation. But the activity of the account, of course, had a direct relation to its earning power, as was shown in Chapter I.

With the general tendency toward reduction in exchange, coming as a result of the institution of the Federal Reserve System, this exchange revenue has been cut down, and bankers are therefore often compelled to give more attention than ever to the balance carried by depositors.

An estimated increase of 15% to 30% in the cost of doing business in the last 10 years is due mainly to the additional demands for service upon every banking department, bankers agree. Nowadays banks carry thousands of unprofitable accounts, accounts on a balance of \$50 to \$200 which have 12 to 15 entries a month and some as high as 50. Obviously such a condition does not require a detailed cost system to ascertain whether these accounts are profitable or not. The difficulty is not so much in devising a method that will reveal the actual loss, as it is to determine how these unprofitable accounts shall be handled and whether they shall be assessed a service charge.

In large cities, investigation indicated, most of the banks prefer to have the small, profitless account closed. In fact, depositors often are notified upon opening an



account that if it falls below a certain minimum balance, say \$100 or \$200, it will be assessed a penalty of \$1 or so a month.

"But even this penalty does not compensate us for the annoyance and expense of carrying these accounts," says one banker. "I have about 500 checking accounts that average a balance of \$150 each, and I would like to throw them all out. I assess the penalty but that does not begin to pay for the trouble entailed in handling these little accounts. I have induced some of the customers who are unable to carry big checking accounts to transfer their accounts to the savings department. Others who have persisted in using the bank simply as a clearing house for their checks have been told to take out their accounts. Without exception, these depositors are willing to pay the small service charge, but even that is insufficient to pay for the time and expense involved."

HOW SHALL THE SERVICE CHARGE ON UNPROFITABLE  
ACCOUNTS BE ASSESSED?

"In 10 years our deposits have grown from \$329,000 to \$1,236,000," says the cashier of a small state bank, "and this growth has naturally been accompanied by a tremendous increase in the number of accounts that we handle. In 1907 the average rate of interest paid was 1.68%, while in 1916 it was 2.08%. This was the highest rate with the exception of 1915, when it was 2.36%. The number of accounts on our books have grown in that time from 600 to 4,200, of which 2,400 are savings accounts and the balance checking accounts.

"The average size of our commercial account is a little more than \$300, yet fully 75% of them are considerably less than that. We have a couple of large industrial accounts that are expensive to handle, and, in fact, one with an average balance of about \$20,000, is actually a cause of loss because it is so active.

"In our savings department we have accounts of all kinds. We just finished a drive for new savings accounts, employing personal solicitors. It produced about 900 new accounts amounting to about \$2,000, but the entire cost of opening them, including the solicitors' commission and the cost of the 'banks' which they gave away, will exceed \$1,000. It will be, of course, some time before these accounts are profitable."

This is a condition that is true in small banks in all sections of the country. In this bank the medium size commercial account which is not too active and the big savings accounts which are latent have to carry the burden of the great mass of small and overactive unprofitable accounts.

"My profit and loss account has come out on the right side of the ledger for many years," this banker declares, "because I have always charged a good rate on my loans. I have charged a straight 7% interest on any loan of less than \$500. If I didn't do this it would be necessary for me to throw out some of these profitless accounts, or to cease soliciting new ones."

"Here is an example of my plan. Four years ago I loaned \$750 to a young farmer. He wanted a team of horses and some other equipment. He put the money in his account and within a few days it was drawn out. Then he issued a few more checks and the account was overdrawn. I notified him and he called at the bank and told me he had no money, so I made him another loan of \$100 and warned him not to overdraw again. In a short time, the bookkeeper notified me that the account was overdrawn \$60.

I wondered what the customer was doing with the money, so I jumped into my machine and went out to his farm, a well-improved, 80-acre piece. I asked him how he was spending the money, and as we leaned against a plow in the field, he enumerated every penny he had spent. I saw that the money was spent

wisely and I knew that this young fellow would make money for me eventually. So I invited him to call when he came to town again. He did and he asked for another loan of \$250, which I gave him.

"I knew this boy's parents well. I knew they were hard workers. I knew they were honest and I felt also that while his little account might not pay immediately it would soon become profitable. At the end of the season when he began to harvest, he started to retire his paper. Before the first of the year he was cleaned up and ready for the next season.

"The following year his account went just the same way until the harvest period, when he again paid up. At the end of the second year, however, he had made enough money out of his crops to make an initial payment on 40 acres more. At the end of four years he owned 160 acres, all improved, and there was very little against it. Then one day an automobile in which he was riding ran off the road and he was killed. I got to figuring what this particular customer would have been worth to me if he had lived and on the basis of the four years' dealings that I had with him, I estimated that in 10 years he would have earned in one way and another close to \$3,000 for me. Yet his account, strictly speaking, was unprofitable at certain seasons of the year."

This recital of how an unprofitable account on its face nevertheless may prove worth while can be duplicated from the experience of banks all over the country. It is not these accounts, however, which close analysis seeks to disturb. These are the accounts which require the banker's personal and deliberate judgment. It is the small checking account which is placed in the bank merely for the sake of convenience, or the irregular savings account which is allowed to lie dormant over a long period, that needs constant checking if profits are to be consistently maintained.

The growth of thrift clubs, as the Christmas savings club, the taxpayers' club, the vacation club, and so on, which are described in the volume on advertising and service, have heavily burdened many banks. These clubs have certainly increased the labor costs and the costs of stationery and supplies, and they have been instrumental in turning the bank to methods somewhat like those of a department store, requiring it to give a far wider degree of service by educating depositors to expect service.

The privilege of enjoying the safety of the bank and of drawing checks and having them paid and returned as receipts for payments made is a great convenience. So long as banks advertise for new business, as nearly all of them do, this service should be extended to anyone who has anything on deposit, most bankers feel.

The wage earner should not only be given the privilege of depositing and checking out, but he should be encouraged to do so. Yet the cost of handling an account, as shown in the previous chapter, is an important item of expense, and in return for maintaining these facilities, the bank should receive compensation. The details of fixing compensation is taken up in the next chapter.

## CHAPTER VII

### HOW TO CHARGE FOR YOUR SERVICES

**W**ITHIN a year after placing a service charge of 25 cents on all commercial accounts which fell below the required minimum balance of \$50, a national bank in Ohio received \$1,875 directly from this source. This paid the services of a book-keeper and an assistant in the commercial department.

"At the outset the president objected to the charge," said one of the officers. "He said it was picayunish for our bank to make a charge of this sort and that we might lose more customers than the returns would justify. In fact, he flatly vetoed the idea at first, but we finally persuaded him to let us try it. He consented to enforce the charge for a short period, but at the same time notified us that if there were any withdrawals from desirable customers he would immediately revoke the service charge order. Thus, the responsibility of putting the charge through was squarely up to the men back of the cages."

"A notice was sent first of all to every depositor in the commercial department, notifying them of the new rule. After the notices were sent out the tellers made it a point to discuss the rule tactfully with the customers as they appeared at the windows. At the end of the first month when the ledgers were examined for minimum balances a record was made of the names of all which fell below the required balance and when the canceled checks and statements were prepared the charge of 25 cents was deducted and a notice similar to that shown in Figure 17, was attached

to the statement. The first month's deductions netted an aggregate of more than \$65. Some of the depositors were surprised to find that they were charged, but when the rule was explained to them again they went away satisfied, promising to try to keep their accounts above the \$50 balance.

The following month showed an even heavier assessment for the service charge and the majority of those who were compelled to pay the 25-cent fee were found to be in the group which was penalized the first month.

Thus, month after month the service charge was made and at the end of the year it was found that less than half a dozen customers had withdrawn their accounts because of the charge. And the accounts that were thus closed were of small value, so there was practically no loss to the bank.

The experience of this bank in making a service charge is interesting for the reason that it illustrates how other banks can make a similar charge without offending customers. This particular bank has long been noted for its policy of not allowing overdrafts. If a customer sends in a check which is too big for his account he is notified immediately and given until 4 o'clock in the afternoon of the day that the check was received to cover his check. If the money is not forthcoming at that time the check is returned marked unpaid and a penalty is assessed.

"Our customers now are well aware of our policy on overdrafts," said an officer of the bank, "and we do not have much trouble enforcing the penalty ruling. In order to avoid ill feeling, we explain to every customer the reason for making the charge. It was surprising at first to find so many people in business who apparently were ignorant of the progress of a check through the bank and the cost of handling it. Since we had definite facts and figures (see Chapter IX) to give them when they asked questions the

**The Second National Bank**

\_\_\_\_\_ 191\_\_

**CHARGE a/c** \_\_\_\_\_  
**TWENTY-FIVE CENTS, FOR MAINTENANCE CHARGE ON MINIMUM ACCOUNT**

**MONTH OF** \_\_\_\_\_  
 Average Balance for the Month  
 Being Less than \$50

**The Second National Bank**

**25 CENTS** By Cashier

Figure 17: This notice form enabled an Ohio bank, at least indirectly, to produce an added service revenue of \$1,875 in one year.

**SHERIDAN TRUST & SAVINGS BANK, CHICAGO**

Account

Opened 19-17-17 Savings Acct. No. 6087  
 Closed ✓ Safe Deposit Box No. 341  
 Re-opened \_\_\_\_\_ Financial Statement ✓

1917

REMARKS		High	Low	Average	Interest	Checks Issued	Borrow	Charge	Checks Refused		Check Presented and Paid Against Subsequent Deposit	
									No.	Amt.	No.	Amt.
Jan.		97	8	56		21	✓	✓				
Feb.		87	11	37		25	✓	✓				
Mar.		62	7	23		9						
Apr.		101	21	34		26						
May		87	9	44		14						
June		129	18	44		10						
July												
Aug.												
Sept.												
Oct.												
Nov.												
Dec.												

1918

REMARKS		High	Low	Average	Interest	Checks Issued	Borrow	Charge	Checks Refused		Check Presented and Paid Against Subsequent Deposit	
									No.	Amt.	No.	Amt.
Jan.												
Feb.												
Mar.												
Apr.												
May												
June												
July												
Aug.												
Sept.												
Oct.												
Nov.												
Dec.												

Other Connections \_\_\_\_\_

Figure 18: A suburban bank finds this an important record because it indicates quickly the value of an account. It shows not only the checks drawn each month but other valuable information as well.

majority quickly realized that the charge was fair and there was little difficulty in assessing it.

"After the charge had been in operation for a year we made a record of the results and placed them on the president's desk. He was surprised, but much gratified. We asked him if he thought it wise to continue the policy and he gave it his full approval."

In this bank the assessment of a penalty is very properly based on the judgment of the officers of the value of the depositor, his connections, and his prospects. To attempt to make a penalty charge on an arbitrary basis undoubtedly would mean that many small accounts of a distinctly worth-while type might unnecessarily be sacrificed.

MAKING UNPROFITABLE ACCOUNTS PRODUCTIVE WITHOUT  
OFFENDING THE CUSTOMER REQUIRES TACT

The "unsatisfactory balance," therefore, has placed the banker in the dilemma of trying to avoid unprofitable business without antagonizing customers or impairing good will. The depositor who is told that his account is not profitable may take it as a personal insult if he is not handled tactfully, and the harm that he might do by expressing his resentment and adverse opinions among other depositors might mean a far greater loss in the long run than the lack of profit from his account.

While it is undoubtedly true that many banks carry small accounts for young business men in the expectation that the accounts will grow and become profitable, there are many instances in which this expectation is not realized. In suburban communities, for example, the bank often is called upon to carry many small household accounts which are constantly checked against, and which do not offer any prospect of becoming larger. Nor do these depositors often become borrowers and thus offer opportunities of profit. The



<b>DEBIT</b>	<b>DATE</b> _____
Remuneration for keeping account below requirement for the <b>PREVIOUS</b> month, \$1	
<b>Extract from Rules Governing Checking Accounts</b>	
A charge of \$1 per month will be made on checking accounts not averaging \$100, unless an account of \$150 or more is also maintained in our savings department. <i>Note—Ladies' accounts, the average balance requirement is \$50 instead of \$100.</i> <i>Exception: No charge will be made on accounts maintained below the required balance if less than six checks are issued during the month.</i>	<b>SHERIDAN TRUST AND SAVINGS BANK</b>  <b>STUB TO DOLLAR CHARGE</b> Remuneration for keeping account below requirement for the <b>PREVIOUS</b> month, \$1  <b>DATE</b> _____  <b>DEBIT</b> We also have account in name of _____ No. _____ Bal. _____  _____  <b>SHERIDAN TRUST AND SAVINGS BANK</b> By _____

Figure 19: This slip for notifying depositors of a "penalty" assessed saves time twofold. It lessens the number of inquiries from depositors and its stub simplifies the service-charge accounting.

<b>Ind.</b>  <b>DEBIT ACCOUNT</b>	<b>HOME BANK AND TRUST CO.</b>  _____ 191 _____  <hr/> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%; border-bottom: 1px solid black; padding-bottom: 5px;"> <b>SMALL BALANCE CHARGE FOR</b> </td> <td style="width: 10%; border-bottom: 1px solid black; padding-bottom: 5px;"></td> <td style="width: 10%; border-bottom: 1px solid black; padding-bottom: 5px; text-align: center;"> <b>\$1</b> </td> <td style="width: 20%; border-bottom: 1px solid black; padding-bottom: 5px; text-align: center;"> <b>—</b> </td> </tr> </table>	<b>SMALL BALANCE CHARGE FOR</b>		<b>\$1</b>	<b>—</b>
<b>SMALL BALANCE CHARGE FOR</b>		<b>\$1</b>	<b>—</b>		
<b>APPROVED</b>	<div style="border-left: 1px solid black; border-right: 1px solid black; height: 100px; margin: 0 auto; width: 100px;"></div>				

Figure 20: Another convenient form used in charging service on profitless accounts. When a depositor's balance goes below the required minimum, this slip is enclosed with his canceled checks.

# DEBIT

Date \_\_\_\_\_

Account \_\_\_\_\_

DESCRIPTION	AMOUNT
CHECKS RETURNED FOR INSUFFICIENT FUNDS	
UNCOLLECTED FUNDS	

THE SECOND NATIONAL BANK  
OSWEGO, N. Y.

TO \_\_\_\_\_

WE **CHARGE** YOUR ACCOUNT

FEB. 1911

FOR CLERICAL EXPENSE HANDLING ABOVE ACCOUNT THIS MONTH	AMOUNT
	<b>FIFTY CENTS</b>

**TO TAKE CARE OF THE GENERAL EXPENSE IN HANDLING YOUR ACCOUNT**  
 Furnishing checks, entering credits, making charges through the books and ledgers, cancelling and filing checks, and returning vouchers—particularly when balances run close and in very moderate amounts, it will be necessary for us to make you a charge as above per month to absorb this expense, and we are today making you a charge as per this slip.  
 WE WILL BE PLEASED TO DISCONTINUE THIS MONTHLY CHARGE WHEN COUNTERPARTING BALANCES ARE MAINTAINED

Figures 21 and 22: One bank sends this "debit" form (top) to delinquent customers each month to help minimize the number of returned checks. The service-charge slip tends to retain the customer's good will.

AVERAGE BALANCE OF <u>Mr. Joseph G. Hammond</u>							
MONTH	1917	1918	1919	1920	1921	1922	1923
JAN.							
FEB.							
MAR.							
APRIL							
MAY							
JUNE							
JULY							
AUG.							
SEPT.							
OCT.							
NOV.							
DEC.							
TOTAL							
YEARLY AVG.							

Figure 23: By keeping the average balances of depositors on cards like this, one bank, with 5,000 checking accounts, is enabled to tell quickly at small cost the value of any of them.

depositor in a suburban bank, for instance, usually carries a larger account with a bank in the city where he works, and there often he seeks his banking accommodation.

This same burden, investigation indicated, is borne in an even greater degree by any bank in a university or college town which is called upon to carry the accounts of a large number of students. The bank balance of the typical college student is not likely even to assume the dignity of three figures except on those occasions of the arrival of a "check from home."

Confronted with this problem, one college town banker decided upon a plan which provided for a charge of 50 cents a month on all students' checking accounts, which fell below the \$50 mark at any time during the month.

Prior to instituting his charge system this banker had approximately 1,400 student checking accounts. The original notice of the proposed change was brought to the attention of the students in December, just two weeks before the close of the first semester. It was announced that the new system would go into effect on January 15, the opening day of the second semester.

Between December 15 and January 25 there was a decrease of 311 in the number of students' checking accounts and at the same time a very substantial increase in the total of student-account balances.

"We are operating with one less bookkeeper than we did before," says this banker, "and the detail work of our present force has been materially reduced by the absence of small and aggravating accounts.

"Prior to December 15 our daily average of returned checks drawn in excess of their balances by students alone, was 11. Since we began the new system we have averaged less than two a day. We also have opened a new ledger account under 'small account fees,' which shows a very substantial balance."

An eastern banker who enforced a method similar to the one just described sent out a letter to all his commercial depositors notifying them that a charge of \$1 a month would be made on checking accounts on which the average daily balance was less than \$50.

Notification cards also were sent out with the statements and the canceled checks of those whose accounts were low on the first and second of each month. In the course of 60 days 536 notices were sent out, representing a total average balance of \$18,762. This was the result:

Accounts	Balances	
	On June 1	On August 1
Closed.....	\$ 2,633	
Increased (commercial).....	6,383	\$28,410
Charged \$1.....	7,431	
Increased (savings deposits).....	641	3,364
No transaction, no charge.....	1,674	
Totals.....	\$18,762	\$31,774
Less balances of June 1 (\$6,383 plus \$641).....		7,024
Net increase.....		\$24,750

Thus, there was a net increase in balances of \$24,750, besides the amount added to the income account from accounts charged \$1 each. At the end of the year it was found that out of the original 536 accounts notified, about 200 had closed out, 225 had increased their balances, and about 75 were paying the monthly charge for the sake of convenience.

When a depositor opens a checking account in one middle western state bank, he is told that the following minimum balances must be maintained: Corporations, firms and individuals, \$100; household accounts of women, \$50.

No charge is made on accounts maintained below the required balances, providing less than seven checks are issued during one month. The theory of assessing the penalty in this bank is, therefore, carried out quite clearly according to the method outlined in Chapter I, where a tabulation appears

showing how many banks govern the number of checks that may be issued against certain balances. This middle western bank seeks to impress upon customers the influence of account activity on rising costs. In order to attract savings accounts this same bank provides that a checking account shall not be penalized if the depositor also maintains a savings account of \$150 or more.

This bank watches accounts in a systematic way. It records the high and low balance, the average balance, and the number of checks issued monthly (Figure 18). When an account falls below the required balance the customer receives a penalty notice similar to that shown in Figure 19. Under this system approximately 275 accounts are penalized monthly. The revenue from this source in one year amounted to \$3,200, which paid the salaries of three clerks and a messenger. During this time only 14 customers were lost as a result of assessing the penalty. In two years the depositors of this bank have grown from \$2,500,000 to nearly \$4,000,000.

THIS BANK PENALIZED 275 ACCOUNTS MONTHLY AND  
LOST ONLY 14 CUSTOMERS DURING THE YEAR

Since the customer is notified of the bank's requirements on a minimum balance, there is seldom any complaint about the penalty. Exceptions are made only when, in the judgment of the officers, a customer should be given a little time, say a few days, to make up the required minimum balance. A memorandum is placed in a looseleaf binder containing the forms which indicate the condition of the account (Figure 18). There are four forms of this sort on a sheet 11 by 11 inches, two on a side and each form is sufficient for one year's record. Thus a customer's average balance by months over a period of four years is shown on a single sheet. This sheet also provides space for remarks.

J H Carson			134 Michigan St							
			1912	1913	1914	1915	1916	1917	1918	1919
1902		January	1 450	1 600	1 100	1 340	1 580	1 833		
1903		February								
1904		March	The Chapman Company (Name) 3418 Washington St (Address) Phonographs (Business) J F Stogues (Introduced by)							
1905		April								
1906		May								
1907	400	June								
1908	300	July	1905		January	4 000	3 700			
1909	450	August	1906		February	3 250	2 300			
1910	600	September	1907		March	2 035	1 400			
1911	890	October	1908		April	1 960				
1912	1 200	November	1909		May	1 700				
1913	1 340	December	1910		June	7 77				
1914	900	Yearly Average	1911		July	6 13				
			1912		August	6 85				
			1913	1 200	September	1 100				
			1914	620	October	1 460				
			1915	890	November	1 310				
			1916	1 600	December	3 900				
					Yearly Average	1 897				

Figure 25: These average balance cards, for which the figures are easily determined from the data shown in Figure 24, comprise a record, instantly available, of 6,000 checking accounts.

AVERAGE BALANCE										
YEAR										
January										
February										
March										
April										
May										
June										
July										
August										
September										
October										
November										
December										
For Year										
Loans										
Maximum										
Minimum										

Figure 26: Here is a variation of the card shown above. Notice that this form includes at the bottom a concise record of maximum and minimum loans to indicate the profit or loss on the account.

This form naturally is of great advantage in determining account activity and in reality is a sort of account analysis. All of the accounts are handled on a machine by a girl who receives \$75 a month. Besides taking care of this work she is able to devote part of her time to other clerical duties.

Another benefit gained from this method is that it provides a basis for an accurate credit file. It shows how each customer stands at different periods and eliminates guesswork.

In addition to the problem of insufficient checking balances there is another checking account problem that demands consideration. It is that of returned checks. In almost every bank this difficulty is an expensive annoyance.

A state bank, which inaugurated a penalty charge similar to that just described, decided to go a step farther and assess a charge of 25 cents against each check which was returned because of insufficient funds. In one month this charge, together with the minimum penalty charge, netted \$206.25.

The commercial department of this bank has not produced much profit because of the sharp competition it must meet and also because of the bank's policy in paying interest on balances. In one month the "interest paid" item in the commercial department amounted to more than \$700.

When the bank started to charge a penalty for returned checks many of the customers threatened to withdraw their accounts. They told, of course, the old story of drawing against an account that they did not know was exhausted.

"The 25-cent charge on returned checks has been more effective than the minimum balance charge of \$1 a month on balances of less than \$50," the president of the bank explained, "because it has compelled depositors to watch their bank accounts more care-



Greenebaum

STATE  
OF THE ACC

For

LINE NO.	DATE	CHECKS	DATE
1	1	45.00 *	1.4
2	1	67.58 *	1.4
3	1	22.55 *	1.4
4	1	167.50 *	1.5
5	1	75.00 *	1.5
6	2	27.50 *	1.5
7	2	100.00 *	1.5
8	2	50.00 *	1.5
9	2	35.00 *	1.5
10	3	59.90 *	1.5
11	3	150.00 *	1.5
12	3	200.00 *	1.7
13	3	25.00 *	1.7
14	4	27.00 *	1.7
15	4	150.65 *	1.7
16	4	76.70 *	1.7
17	4	25.00 *	1.8
18	5	300.00 *	1.8
19	5	250.00 *	1.8
20	5	22.50 *	1.8
21	6	100.00 *	1.8
22	7	165.00 *	2.0
23	7	255.25 *	2.0
24	7	425.00 *	2.0
25	8	150.00 *	2.1
26	8	38.98 *	2.1
27	8	27.50 *	2.1
28	8	50.00 *	2.1
29	9	550.00 *	2.3
30	9	100.00 *	2.3
31	9	1000.00 *	2.3
32	9	56.45 *	2.3
33	9	20.23 *	2.3
34	10	500.00 *	2.3
35	10	135.20 *	2.3
36	10	67.77 *	2.3
37	10	22.12 *	2.4
38	10	35.00 *	2.4
39	10	40.58 *	2.4
40	11	500.00 *	2.4
41	11	157.65 *	2.5
42	11	98.90 *	2.5
43	11	23.55 *	2.5
44	11	23.50 *	2.5
45	11	150.00 *	2.5
46	11	250.50 *	2.7
47	11	25.56 *	2.7
48	11	75.00 *	2.7
49	11	55.00 *	2.7
50	11	67.87 *	2.8

INSERT I

Please examine this statement upon receipt and report any differences of kind or amount to the bank immediately. If not found good at the time of receipt, no claim against this bank can be made thereafter. Checks on this bank will be credited conditionally. If not found good at the time of receipt, no claim against this bank can be made thereafter. All items not payable through the Chicago Clearing House Association, not owner's risk. This bank, as agent for the owner, will forward same to the proper authorities, or remit in checks or drafts which are otherwise disallowed. This bank assumes no responsibility for neglect or default of collect.

Figure 24: In checking average it saves time and insures accuracy by from this statement sheet, which is chines and filed alphabetically. The





fully. The other day one man walked in and said he was going to take out his account because a charge of 25 cents was made erroneously. I told him we would be glad to rectify the error, if one had happened, and I asked him to allow me to make an investigation. When I went to the books I found that he had drawn two checks on a certain day and when I told him the amounts of the checks he paused in deep thought.

"Yes, I did draw those checks," he said. "I forgot to make a note of them. I'm sorry that the overdraft happened and I won't let it occur again."

"This customer," the president continued, "was quickly convinced how easy it is to make a mistake in a bank account and similarly hundreds of other customers of ours, who at first were as indifferent as this man, now take pains to see to it that there are funds in the bank before they write a check.

In assessing penalties on insufficient balances in this bank a form similar to that shown in Figure 21 is attached to the statement at the end of the month and where the 25-cent charge for returned checks is necessary, a form similar to Figure 17 is used.

Another charge form that is successfully employed in a small group of eastern banks is shown in Figure 22. This form, you will note, explains why the bank finds it necessary to make the charge and it also seeks to assure the depositor that the charge will be discontinued when a compensating balance is maintained.

In order to make the penalty rule effective it usually is desirable to keep a record of the average daily balances on checking accounts. This task is not so difficult as it appears. A bank with \$7,000,000 deposits was found to be doing this at a cost of less than \$750 a month, which cost was more than offset by the revenue received. The work is done by a girl who handles 5,000 accounts monthly with the aid of a machine. She takes the ledger stubs from the book-

keeping department and files them alphabetically. At the end of the month all of the stub averages, separated into alphabetical sections, are run through the machine. As fast as the averages are taken she lists them on specially provided cards (Figure 23). These are filed alphabetically so that quick access can be had to them.

This system enables the officers to determine at a glance the average balance of any account. If it runs below the minimum a charge is made of \$1 a month.

In another bank a girl completes a similar task on approximately 6,000 accounts in about two weeks. The figures are taken from the stubs of statement sheets (Insert I) and the data is placed on cards (Figure 25) which are filed alphabetically. Averages for each month for eight years can be placed on one card, while space is left at the left side of the card for figuring the yearly average. A variation of the form is shown in Figure 26.

The cards are filed in a steel cabinet in the credit department. Aside from expediting the work of the credit manager they form an important source of information for other officers. A glance at the card will show an account's actual progress, activity or inactivity, and give in a general way an idea of the danger or safety of the account, whether it is producing a profit or a loss, and so on. When the card indicates that the customer is running below the required minimum balance of \$200, a charge of \$1 per month is made. There are exceptions to this ruling, however. It is up to the credit manager to determine whether or not a man allowing his balance to go below the required minimum should be charged a penalty.

It appears, then, that the banker differs in no whit from business men in any line when it comes to certain fundamental conditions. While giving all the service that he can to his patrons, he must, nevertheless, stand up steadfastly for a legitimate profit.

## CHAPTER VIII

### KEEPING YOUR ASSETS LIQUID

**A**N eastern bank carried so many mortgage loans that it had practically all of its available savings deposits tied up in them. A period of commercial depression set in and a sharp shrinkage in deposits followed. It was a difficult task for the bank to maintain its cash reserve, and, although its mortgages were good investments at 6%, they produced no current cash income except semiannually.

Similar, but more disastrous, was the situation into which a Pennsylvania bank fell. After constructing a \$900,000 building this bank was caught in a depression of coal land values. The vast sum that it had tied up in the building was not available when the pressure came and it was forced to close its doors.

These are only two of many incidents available to show the results when bankers have failed to keep their assets in a liquid condition. Important as a constant check on accounts undoubtedly is, it is even more essential that the banker, as well as the merchant or manufacturer, should give the same close attention to rate of turnover of his stock in trade—his assets. When he does so he takes a decisive step toward insuring and protecting profits. He can do it by making a daily analysis of the assets to determine what they are earning. This method will be fully described in the volume dealing with executive control.

As must the head of the successful commercial establishment, the banker must be constantly alert to the proper arrangement of his assets if costs are to be

kept down and dividends continued. When the rate of turnover in the factory or store is not satisfactory, for example, it is usually due to one, sometimes to all, of these causes:

a. A poor stock of goods.

b. Unwillingness to sell below cost (thus causing the accumulation of a big stock) and to sacrifice unseasonable or slow-moving stock.

c. Unwieldy stocks that absorb the funds which should be available for new goods.

Conditions of exactly similar sorts are brought about in a bank as a result of:

a. Poorly balanced assets that tend to pull the reserve below the required level.

b. Unwillingness to call for payment, which results in the accumulation of a big, unprofitable supply of permanent assets, which in turn sometimes forces liquidation.

c. Development of non-liquid assets which tie up available funds and impair the reserve.

Turnovers in the bank are, therefore, as important as in any other business line, and when the banker watches his reserves he is, in fact, watching his turnovers precisely in the same way as did the banker whose cost-finding system is described in Chapter I. And the rate of turnover in the bank is determined in much the same way as in any other business. Take, for example, the total asset (note, bond, mortgage or whatever is being tested) for the beginning of a period, add the new loans made during the period and deduct the present amount of the asset. Divide this by the starting total. This gives the number of times the asset has been turned over.

This, of course, is on the assumption that all notes and other maturing indebtedness are liquidated at maturity. To ascertain accurately the liquidity of the

assets, it would therefore be necessary to make allowances for all renewals made during the period. When the rate of turnover is checked off in this way, it almost always means the maintenance of adequate reserve under all conditions and the keeping of assets that are worth 100% on the dollar.

Reserves are maintained through two sources—by the increase of deposits and by cash income from the assets. Too many bankers are more interested in their deposits than in their actual asset liquidity.

A COST SYSTEM SHOULD ALSO BE A SAFEGUARD AGAINST  
ACCUMULATING DOUBTFUL COLLATERAL

Any cost system to be effective must therefore show from day to day the actual condition of the reserve in the same way that it reveals an insufficient balance or an unprofitable checking account. Since a cost system usually compels more effective management it will help to remove the danger of accumulating bad or doubtful paper and tend against the development of assets so non-liquid as to produce insufficient cash income.

A non-liquid condition not only seriously impairs the profit line but often endangers the very life of the bank. It is generally indicated by money borrowed for continuous periods and under normal conditions. It may result from loans made for capital purposes that must either be repaid from profits or liquidation of the business to which the money was lent, or it may result from a careless planning of a bank's assets.

Take the instance of a bank in a western city with footings of approximately \$2,500,000. The deposits were about evenly divided between the savings and the commercial departments. The commercial deposits included large amounts of city funds and about a half dozen accounts of fraternal organizations with balances as high as \$100,000 each, but subject to heavy demands for payments at all times.

Now this bank carried as an asset \$1,200,000 in loans on notes and collateral as distinguished from bonds, mortgages, and other investments. If its loans to customers were repaid promptly and not simply extended, these ordinarily should be the most liquid asset. These might, for instance, include sufficient purchased commercial paper on loans, so that the bank would be under no obligation to renew any sudden demands of depositors. But the bank's statement showed a continuous line of bills payable, rediscounts and bonds sold under repurchase agreements. An investigation of the lines of credit in this bank indicated line after line which started at \$10,000 and year after year steadily increased, perhaps finally aggregating four or five times the original amount borrowed.

These lines, as a matter of fact, served as permanent capital to many borrowers. They were in that condition mainly because the bank officers and directors knew little or nothing about their costs and other problems definitely related to their income and disbursements. These officers evidently preferred to renew rather than say "no" and this, of course, necessitated heavy borrowing by the bank.

Still, these credit lines were in part protected by collateral and were in general collectable, if granted a certain period of time, without a forced sale of the collateral. Investigation revealed also that the bank was compelled to absorb considerable losses owing to the evident incapacity of the officers making loans and their apparent indifference toward compelling prompt payment. The great lesson that came out of the near failure of this bank was that while it had losses, these losses were taken care of by its capital and surplus and also by the personal funds of the directors. But even after these losses were disposed of the bank was in a serious general condition because the balance of its loans were uncollectable.

The well-managed bank should, therefore, be on its guard against the dangers caused by heavy credit extensions that are not retired at maturity, or unusually large commercial accounts subject to payment on demand. This is best accomplished by a distribution of the liquid assets which, in effect, is precisely the same principle of management that compels the commercial producer or trader to employ his capital as many times yearly as possible.

A Michigan bank with deposits of more than \$4,000,000 furnishes an interesting example of how profitable results can be secured by speeding up turnovers and cutting costs. It is the policy of this banker to insist that when a borrower signs a note he means "I promise to pay" and not "I promise to renew." When a note becomes due, he seeks to enforce some kind of payment, either in part or whole, and he insists also that credit lines be cleaned up or at least materially reduced at least once a year.

The cashier of another Michigan bank with resources of \$1,100,000 always insists on a second "signer."

"This rule goes for all classes of borrowers," he explains, "but it is intended principally for the small borrower who is usually honest but does not have real estate or collateral. When men or women of this type come to the bank and want a loan I always ask them to get an endorser. Sometimes they tell me they can't do so and often I agree to go on the note with them and at the same time I explain that since I am personally interested in the transaction I will look to them for prompt payment. In this way I have gained something of a reputation for personally looking after a great many of our small loans. The result of this policy is that I charged off less than \$300 on this class of paper last year."

Another simple and effective method of protection is to supplement the first line of defense—the cash



reserves and the deposits in the bank—with a sufficient amount of purchased commercial paper which the bank is under no obligation to renew, and so is in a position to liquidate readily to meet any reduction in demand deposits.

A strong and successful commercial bank in the West has a secondary defense, consisting of several millions of dollars more than its total liability to banks and bankers, invested in commercial paper. When the reserves are lowered by demands on the deposits the officers stop purchasing commercial paper and let the maturities of the paper already owned balance the pressure.

A third line of defense consists in planning the asset so as to provide a sufficient current cash income. This means fulfilling the requirements already outlined and thus avoiding the danger of tying up too much of the deposits in real estate, bonds, and mortgages which usually produce no important cash income except by slow liquidation.

STABILITY AND VOLUME OF BUSINESS ARE LARGELY  
DEPENDENT ON THE RATE OF TURNOVER

Entirely in addition to the safety that results from an active rate of turnover, it is clear that the faster the turnover the greater the volume of business that can be conducted with a given capital. This is especially true of a bank because it usually has less capital investment in proportion to its total assets than perhaps any other business with the possible exception of brokerage in stocks. With the proceeds of rapid rates of turnover, the bank naturally is able to make new loans, to diversify its loans, and to lend to applicants who will bring more business to the bank.

Suppose, for example, that a bank has a depositor named Heath and that it lent him \$1,000 in January. If the loan is renewed in full from time to time, at the

end of a year Heath has been taken care of for that amount and the bank's money has been satisfactorily invested at a good rate of interest. Now, suppose that by arrangement at the time the loan was made the bank requires Heath to pay that loan in June or liquidate it by a series of payments, and then takes the proceeds and lends them to Davis, who is not a customer, but who because of this accommodation brings his business to the bank. Under this plan the bank's \$1,000 has taken care of Heath and attracted the account of Davis which illustrates a principle that can be applied with variation in any department of the banking business.

Now let us turn to a policy that is directly opposite. Many banks invest in mortgages due in five years with no intermediate payments required. On the other hand some savings banks lend heavily on mortgages that carry monthly payments on the principal. Banks of the last named type, of course, have the advantage of the higher rate of interest as well as of the current cash income from the monthly payments which give them lendable funds at times when banks with a five-year loan policy have little or no funds available. For example, if the reserves of a certain Ohio savings bank are lowered, the officers stop lending, and the \$80,000 in cash monthly payments received on its mortgage investments rapidly bring the reserves up to the proper requirements.

Banking, therefore, like many other types of business, involves the risk of losses which usually are most likely to affect the profits of the stockholders only, although in some instances as already indicated, they have been so great as to imperil the very existence of the bank. These losses, as has been shown, are due principally to inadequate internal control, ineffective regulation, inaccurate analysis and also to bad loans and discounts and investments which slow down the

rate of turnover. These problems are more thoroughly discussed and considered in the volume of this series devoted to internal management.

A program like that which follows will almost always help a bank to obtain a profit and to prevent the hidden losses that frequently burden the charge-off account:

1. An appraisal of the assets, loans, discounts, and investments, as called for by the records of the bank without necessarily verifying their actual possession. The purpose of this appraisal should be to determine whether the assets are liquid and whether the bank is carrying them at a reasonable or inflated value.

2. An examination of the profit and loss account to determine the bank's progress by noting the amount of gross and net earnings, exclusive of special profits, for two or more consecutive years, and the relation of the regular dividends to the net earning power.

3. An investigation of the bank's system of internal audit to determine whether the bank is properly protecting its staff from opportunities for wrongdoing, and thus protecting stockholders and depositors.

4. A verification of the bank's possession of the assets called for by its records and statements on the date of the examination.

When a plan like this is followed, attention is clearly drawn to assets, loans, discounts, and investigations, and the possibilities of profit or of loss can, of course, be ascertained quickly.

To sum up, a bank, like other businesses, often can best win out by turning its stocks—money—many times during a year at a small profit rate on each turn, always exercising care to see that the books do not become burdened with bad debt losses—borrowers who do not or cannot pay.

## CHAPTER IX

### HOW TO DETERMINE THE ITEM COST

**L**AST month one of our depositors had just 1 cent left in his account when his canceled checks and statement were prepared," declared the cashier of an Ohio bank. "The month before that same customer had only 17 cents in his account at the end of the month. Whenever he deposited a check he immediately began to draw against it and often we were compelled to send out a messenger or call him on the telephone to notify him that he was overdrawn.

"This account was a cause of loss and much annoyance, yet we were willing to serve this depositor because he is of value to us. A few days ago he brought his aged aunt into the bank. She had just received \$6,500 from an insurance company. He induced her to put it in the savings department. A short time before that he introduced an electric lineman to us. This man had received \$4,000 for personal injuries received while at work and he deposited this money with us. And so you see our depositor, whose account apparently was a loss, was in fact the creator of \$10,500 in new business and was therefore entitled to more than ordinary consideration."

In this bank there are other unprofitable accounts which the cashier is willing to keep on his books simply because the depositors behind them have connections that contribute other business.

It is because they feel similar conditions apply all to profitless accounts that many country bankers fail to analyze closely the item costs. Nevertheless this

problem of item cost is one of the most important confronting any banker who wants to determine expenses accurately. There may be some accounts on the books which, although a direct cause of loss as in the Ohio bank, nevertheless are an indirect source of profit, but it is also true that there are in every bank scores of accounts that fail to yield a profit of any sort. When the banker finds out his item cost he will have an effective weapon for curbing checking-account abuses and stopping leaks that drain earnings.

The first essential in analyzing an account, investigation indicated, is to apportion the expense incidental to each account to that account and to pass to its credit its due proportion of earnings. It is necessary also to ascertain the loanable balance by finding the average balance from which must be taken the amount credited but in process of collection, as shown in Figure 27. Obviously, if the balance that can be lent or invested earns less than the account costs, the account is a loss. The actual usable balance, therefore, is the right basis for determining the earnings.

A bank must keep part of its deposits in the reserve and this part cannot be loaned, nor is it possible to employ funds that are in transit. These items, therefore, must be deducted from the average or actual balance in order to arrive at the loanable balance, and the earning power of money must also be determined so as to credit each account with its proper share.

In arriving at exchange charges and the loss of interest on an account, the items that are collected should be analyzed, their costs determined along the line of the method that follows and the time consumed in making the collection figured so that the interest loss will be possible of computation. Thus, an item sent to Dallas, Texas, will consume four days going from an eastern point, the same time in returning, and perhaps another day should be added for

Date	Daily Balance		Amount in Transit				Exchange	
	Debit	Credit	1 Day	2 Days	4 Days	8 Days	Paid	Rec'd
1		\$1,900	\$1,200		\$500		\$0.25	\$0.50
2		2,000	1,800					
3		3,010			500			
4		3,765		1,900		100		
5		3,765						
6		1,800	500			50		
7	\$300				80			
8		1,000			270			
9		4,900	1,000					
10		2,200				500		
11		3,000		2,000	400			
12		3,000						
13		4,500	1,500		150			
14	200					270		0.30
15		2,700			510			
16		3,500	2,000					
17		3,900	1,000		70			3.50
18		4,200		3,000		180	2.50	
19		4,200						
20		2,100			200			
21		5,700	1,500			400		
22		4,500			300			
23	500							
24		4,360	1,000		120			
25		2,300		1,000	200			
26		2,300						
27		2,800						
28		1,500						
29		2,400						
30		2,200						
Total	\$1,000	\$83,500	\$11,500	\$7,900	\$3,300	\$1,500	\$2.75	\$4.30

Figure 27: This form furnishes one bank a ready means of ascertaining any deposit balance available for loans, and it is one of the first steps in determining item cost. It indicates how the exchange, the amount credited but in process of collection, and so on, are deducted.

delays in the mails. Nine days' interest therefore is lost before the funds become available in any way for lending or investment.

The importance of keeping track of this interest factor is effectively illustrated in Figure 27, which gives the history of an account over a period of 30 days. It is worth while analyzing this account from the deposit of \$1,900 on the first day of the month down to profit and loss in order to show how a direct and simple method can usually be adapted to the needs of almost any bank.

INVESTIGATION INDICATES THAT THE AVERAGE ITEM COST FOR  
HANDLING COMMERCIAL ITEMS IS FROM 2 TO 3 CENTS

In the bank furnishing this statement the amount lent or invested was \$1,220,000 at an average of 6%, bringing a gross revenue of \$73,200. The operating expense for a year was \$15,086, or 1.3% of the total deposits, a fair average according to the operating figures quoted in Chapter II. The net earning rate in loans was 4.763%. In one year there were 380,338 items handled in the commercial department and the activity expense was found to be \$8,891, or a cost of \$0.0233 per item. In well-managed banks, investigation indicated, the cost of handling a commercial item varied from 2 to 3 cents, so that the mark in this bank compares favorably with the general average.

The expense of the size of the account was apportioned according to the amount of the balance. In this bank deposits were in the neighborhood of \$1,000,000. The size distribution, on the basis outlined on page 89, is \$2.05 per \$1,000 per year, or 17 cents a month. There are 1,165 commercial depositors and the total expense is \$4,752, making a charge of \$4.08 per year, or 34 cents a month, on each account. On the account illustrated in Figure 27 there was a loss of \$3.69 a month, or \$44.28 a year, as the following indicates:

## INCOME EARNING BALANCE

(1) Average daily balance.....	\$2,750
(2) Less the average amount in transit, or.....	1,750
(3) Equals a net cash daily balance of.....	<u>\$1,000</u>
(4) Less: Reserve in vault, 4%, or \$40, with reserve bank, 8%, or \$80—total.....	120
Income-earning remainder.....	<u>\$880</u>

## GROSS PROFIT OR LOSS

Income-earning remainder employed as follows:

	Income	Expense
With reserve agents, 0% at 0%.....		....
(5) With other banks, 3% at 2%.....	\$0.05	....
(6) Loaned and invested, 85% at 4.763%.....	3.37	....
(Exchange).....		....
(7) Received on interest.....	4.30	....
Paid for collection.....		\$2.75
(Interest).....		....
(8) On overdrafts (\$1,000 at 6%).....	.17	....
Paid on average balance (\$2,750 at 2%).....		4.52
Totals.....	<u>\$7.89</u>	<u>\$7.27</u>
Gross Profit.....	./.	<u>\$0.62</u>

## NET PROFIT OR LOSS

Gross profit brought down.....	\$0.62
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## OVERHEAD COST

(9) Charge for activity 163 items at \$0.0233 a year.....	\$3.80
* (10) Charge for size (cash balance \$1,000 at \$2.05 a year).....	.17
(11) Charge for number (1,165 at \$4.08 a year).....	.34
	<u>\$0.62</u>
Net loss.....	3.69
Balance.....	<u>\$4.31</u>
	<u>\$4.31</u>

An analysis of this sort is almost always certain to stop expensive leaks and to compel attention to items that usually are neglected because of a lack of organized and definite methods. In many banks, for example, uncollected items are credited, as cash, making the apparent balance much more than it really is. When this practice is allowed to continue, interest is paid on uncollected items.

A simple form of analysis such as that already described will help to search out these heavy drains on the profit line. It will do even more, since it helps

\*Number and size, of course, refer to the number and size of accounts.



## FINDING BANK COSTS

to reveal individual account activity in relation to the total number of accounts, and thus prepares the banker for the problem of the so-called service charge. Following is a typical distribution of item cost:

## SUMMARY OF ITEM COST

## Cost of Handling Per Item by Departments]

Discounts.....	\$0.80562
Collection.....	.0208
Notes.....	.0299
Receiver (checks and deposits—does not include cost of checks and pass books).....	.006658
Exchange.....	.0930
Clearing house teller.....	.0008
City books.....	.015
Transit.....	.00497
Mail and clearing house.....	.001444
Clearing house (afternoon).....	.001045
Foreign books.....	.0128
Savings (including advertising and stationery).....	.3560
Savings (without advertising cost).....	.1880
Savings (cost of handling interest entry).....	.0165

## ITEM COST OF ACCOUNTS BY DEPARTMENTS

## Bookkeeping

Inactive salary.....	\$1,260
Rent, light, and so forth.....	1,040
Total.....	<u>\$2,300</u>
Total accounts—6,674—cost.....	26,590.00
Less inactive accounts—1,871—estimated cost.....	<u>2,300.00</u>
Gives 4,803 active accounts cost.....	\$24,290.00
Bookkeepers' estimate of time occupied with accounts of \$1 to \$500, about 50%, or.....	\$11,500.00

## Receiver

Total items—10,005—cost.....	\$20,320.00
Individual items—1,346 equals 13.45%.....	
13.45% of \$20,320 is.....	2,733.04
Estimated cost of inactive accounts about 6%.....	<u>150.00</u>
Cost of all active accounts.....	\$ 2,583.04
Bookkeepers' estimate of time occupied with accounts of \$1 to \$500, about 50%, or.....	\$ 1,291.52

## Clearing House Teller

Total items—8,794—cost.....	\$ 2,120.00
Individual items—3,899 equals 44.33%, or.....	939.80
Estimated cost of inactive accounts.....	<u>50.00</u>
Cost of all active accounts.....	\$ 889.80
Bookkeepers' estimate of time occupied with accounts of \$1 to \$500, about 50%, or.....	\$ 444.00

	Mail	
Total items—45,307—cost.....		\$19,960.00
Individual items—3,033 equal 6.69%, or.....		1,335.22
Estimated cost of inactive accounts.....		50.00
Cost of all active accounts.....		\$ 1,285.22
Bookkeepers' estimate of time occupied with accounts of \$1 to \$500, about 50%, or.....		\$ 620.00

## SUMMARY

Cost of Handling 3,541 Active Accounts		
Bookkeepers.....		\$11,500.00
Receivers.....		1,291.52
Clearing house.....		444.00
Mail.....		620.00
*Total.....		\$13,855.52
\$13,855.52 divided by 3,541 equals.....	\$	3.91

Cost of Handling 1,871 Inactive Accounts		
Bookkeepers.....		\$2,300.00
Receivers.....		150.00
Clearing house.....		50.00
Mail.....		50.00
*Total.....		\$2,550.00
\$2,550 divided by 1,871 equals.....	\$	1.36

## ANALYSIS OF INDIVIDUAL ACCOUNTS

("Inactive" \$1 to \$500)

Number of Accounts	Aggregating	Estimated Annual Hand- ling Cost of each Account
1,871	\$136,624	\$1.36

("Active" \$1 to \$500)

Number of Accounts	Aggregating	Estimated Annual Hand- ling Cost of each Account
3,541	\$442,958	\$3.91

How near these costs approach average cost figures compiled for statistical purposes, the following summary shows:

Average balance of each individual account .....	\$106.90
Average estimated annual cost of handling.....	3.02
Estimated annual earning capacity of an average daily balance of \$100.....	3.38

In analyzing individual accounts this classification is considered desirable: \$1 to \$100; \$100 to \$500; \$500 to \$1,000; \$1,000 to \$5,000; \$5,000 to \$10,000; \$10,000 to \$20,000; and \$20,000 and over; under the headings: Male, female, manufacturers, firms, and corporations.

\*The paying department is not included in the above figures as it is difficult to ascertain a reasonable percentage of time given to individual depositors. If a 10% basis is taken, the cost to handle "active" accounts of \$1 to \$500 would increase to \$4.18 and "inactive" to \$1.41, and the average total cost would be \$322.

## FINDING BANK COSTS

## GENERAL ITEM COST BY DEPARTMENTS

## Discount Department

Labor.....		\$ 5,140	
Administration—rent, light, heat, power.....		41,200	
Total.....		<u>\$46,340</u>	
Average number of items daily.....	189		
Average number of items yearly (305 days).....	57,645		
Cost per item.....		\$	0.8056
Average number of debits daily.....	31		
Average number of credits daily.....	33		
Average number of items discounted.....	66		
Average number of maturing items paid.....	27		

## Handling Cost Per Item (Clearing House—Afternoon)

Labor.....		\$ 384	
Administration.....		880	
Total.....		<u>\$ 1,264</u>	
Average number of items daily.....	3,966		
Average number of items yearly (305 days).....	1,209,630		
Average cost per item.....		\$	0.001045
Additional average cost per item received.....			.006658
Total.....		<u>\$</u>	0.007703

## Mail and Clearing House

Labor.....		\$10,160	
Administration.....		9,800	
Total.....		<u>\$19,960</u>	
Average number of items daily.....	45,307		
Average number of items yearly (305 days).....	13,808,635		
Cost per item.....		\$	0.00144

## Collection Teller

Labor.....		\$ 2,530	
Administration.....		3,600	
Total.....		<u>\$ 6,130</u>	
Average number of debits daily.....	290		
Average number of drafts and so forth, daily.....	675		
Total items.....	965		
Average number of items yearly (305 days).....	294,325		
Cost per item.....		\$	0.0208

## Exchange Teller

Labor.....		\$ 2,320	
Administration.....		7,000	
Total.....		<u>\$ 9,320</u>	
Average number of debits daily.....	145		
Average number of credits daily.....	26		
Average number of drafts daily.....	159		
Total.....	330		
Average number of items yearly (305 days).....	100,650		
Cost per item.....		\$	0.09259

# DISTRIBUTING THE ITEM COST

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## Note Teller

Labor.....	\$ 2,920
Administration.....	3,850
Total.....	<u>\$ 6,770</u>
Total items daily.....	741
Total items yearly (305 days).....	226,005
Average cost per item.....	\$ 0.02995

## Payer

Labor.....	\$ 8,400
Administration.....	12,300
Total.....	<u>\$20,700</u>
Average number of items daily.....	546
Average number of items yearly (305 days).....	166,530
Average cost per item.....	\$ 0.1243

## Transit

Labor.....	\$15,220
Administration.....	16,100
Total.....	<u>\$31,320</u>
Average number of items daily (mail).....	15,950
Average number of items daily (counter).....	4,693
Total average number of items daily.....	20,643
Average number of items yearly (305 days).....	6,296,115
Average cost per item.....	\$ 0.004974

## Receiver

Labor.....	\$ 7,870
Administration.....	12,450
Total.....	<u>\$20,320</u>
Average number of items daily.....	10,005
Average number of items yearly (305 days).....	3,051,525
Average cost per item.....	\$ 0.006658

## Savings

(Figures from January to July)

Total debits.....	11,706
Total credits.....	30,723
Total.....	<u>42,429</u>
Department expense.....	\$14,254.93
Department proportion of rent and light.....	1,000.00
Total.....	<u>\$15,254.93</u>
Less cost of computing operating interest.....	150.00
Total.....	<u>\$15,104.93</u>
Less advertising.....	7,978.24
Total.....	<u>\$ 7,126.69</u>
Cost per item (including advertising).....	\$ 0.356004
Cost per item (without advertising).....	.188037
Cost per item (interest postings).....	.016547

## FINDING BANK COSTS

## Clearing House Bills

(Cost includes all stationery, checks, books, and the like)

Labor.....	\$ 1,600	
Administration.....	520	
Total.....	<u>\$ 2,120</u>	
Average number of debits daily (morning).....	8,794	
Average number of debits daily (afternoon).....	265	
Average number of credits.....	<u>12</u>	
Average number of items daily.....	9,071	
Average number of items yearly (305 days).....	2,766,655	
Average number of individual debits daily.....	3,899	
Average number of country debits daily.....	4,895	
Average cost per item.....	\$	0.00758

## Foreign Books

Labor.....	\$12,600	
Administration.....	<u>13,050</u>	
Total.....	\$25,650	
Average number of debits daily (morning).....	4,895	
Average number of debits daily (afternoon).....	388	
Average number of credits daily.....	<u>1,417</u>	
Average number of items daily.....	6,700	
Average number of items yearly (305 days).....	2,043,500	
Cost per item.....	\$	0.01255

## Individual Books

Labor.....	\$13,540	
Administration.....	<u>13,050</u>	
Total.....	\$26,590	
Average number of drafts daily.....	4,948	
Average number of credits daily.....	<u>800</u>	
Average number of items daily.....	5,748	
Average number of items yearly (305 days).....	1,753,140	
Average cost per item.....	\$	0.01511

Cost of Handling Transit Items  
(One Month)

Salaries.....	\$ 2,306.67	
Administration.....	<u>233.97</u>	

## Machines, Stationery, and so forth

Machines and repairs.....	\$ 142.75	
Stationery.....	166.66	
Postage.....	<u>750.00</u>	

## County Clearing House

Administration.....	\$ 393.56	
1/8 of tax on capital stock (last year).....	570.30	
Interest on \$400,000 at 4% per annum.....	<u>1,333.33</u>	
Total.....	\$ 5,897.24	
Number of items handled.....	395,770	
Cost per item.....	\$	0.0149

## EXAMPLE "A"

---

Average earning rate at $4\frac{1}{2}\%$ .....	\$22,500.00
One man, $2\frac{1}{2}$ hours daily to handle accounts current for year.....	\$378.65
Two men, 15 minutes daily to handle acceptances..	75.65
Three men, $2\frac{1}{2}$ hours four times a year to handle account dividends.....	15.00
One man, 10 minutes daily to examine endorse- ments.....	16.00
Four men, 20 minutes daily to examine signatures..	49.70
One man, 15 minutes four times a year to handle special work.....	39.50
One man, 10 minutes daily to handle checks.....	25.25
Total cost.....	\$ 599.75
Indicated value of account for year.....	\$21,900.25

---

*Here is an illustration of loose accounting. Costs are figured on the basis of labor expense alone.*

---

The foregoing figures give in general an analysis of every item cost in one bank. They are interesting for what they suggest to bankers who are working on cost problems. Probably, however, the greatest attention is paid by many banks to the expense of handling each individual depositor's account because of the leaks often found in taking care of this branch of the business.

There are some accounts that carry special costs which should be a charge to them individually. A small bank in Michigan, for example, handles the account of a produce commission house which does a large business with farmers. The bank furnishes special checks and other supplies to this house and carries large sums of cash to pay off the company's checks, which are many and small in size. The cost incidental to handling this account is heavier than on the accounts as a whole, and in order to compensate the bank for the service that it renders, this company carries a heavy and profitable balance. Thus the cost of the account is offset by the satisfactory returns produced from the balance.

## EXAMPLE "B"

Daily average balance.....	\$500,000.00	
Less average amount in transit.....	100,000.00	
Leaves balance of.....	<u>\$400,000.00</u>	
Less 25% reserve.....	100,000.00	
Leaves actual usable balance of.....	<u>\$300,000.00</u>	
Earnings at 4½% on \$300,000.....		\$13,500.00
135,000 items through receiving teller at \$0.0042.....	\$	567.00
101,000 items through clearing house at \$0.0011.....		111.10
17,500 items through check desk at \$0.0075... ..		130.25
10,000 items over "city collections" at \$0.01..		100.00
500 items over transit desk at \$0.005.....		2.50
52,000 items from clearing house at \$0.0075... ..		<u>390.00</u>
Total cost.....		<u>1,300.85</u>
Indicated value of account for the year.....		<u>\$12,199.15</u>

*Here costs have been estimated closer than in Example "A," but an ex-orbitant profit has been inadvertently figured for the account.*

Now an analysis like that set forth is valuable because it furnishes information which the officers can use in shaping an effective management policy. Even if an account shows a loss under the analysis it does not always mean that it should be closed. Experience has shown that any system which would arbitrarily require the elimination of unprofitable business would be foredoomed to failure. It would mean, doubtless, the loss of profitable accounts as well.

The danger in such a method is strikingly illustrated in the instance previously mentioned of the individually unprofitable customer who nevertheless brought in more than \$10,000 in new business. Since the accounts are the foundation of the business it is not so important to determine how much each individual account costs or earns but rather how to apportion the costs and the earnings on an equitable basis. Some bankers, investigation indicated, strive to determine the cost by estimating the cost of labor to handle it. Others attempt a more definite analysis, which, however, is lacking in a detailed distribution of the

## EXAMPLE "C"

Daily average balance.....	\$500,000.00	
Less average in transit.....	100,000.00	
Leaves net average balance.....	<u>\$400,000.00</u>	
Less 25% reserve.....	100,000.00	
Leaves actual usable balance.....	<u>\$300,000.00</u>	
Earning (an average of $4\frac{1}{2}\%$ on \$300,000).....		13,500.00
Exchanges received.....		10.00
Total earning capacity.....		<u>\$13,510.00</u>
135,000 items through receiving teller at \$0.008.....	\$ 1,080.00	
101,000 items through clearing house at \$0.0022.....	222.20	
17,500 items over check desk (in) at \$0.015....	262.50	
16,000 items over "city collections" at \$0.02..	320.00	
500 items over transit desk at \$0.018.....	9.00	
52,000 items over check desk (out) at \$0.015..	780.00	
Currency, one man 1 hour daily.....	75.00	
Special work.....	21.90	
Clearing house.....	18.42	
Exchange cost.....	2.50	
\$500,000 daily average balance—cost of administration.....	2,500.00	
2% interest on net average balance of \$400,000	<u>8,000.00</u>	
Total cost.....		<u>\$13,291.52</u>
Indicated net value of the account for the year.....		<u>\$ 218.48</u>

*In this example care has been taken to include with direct expenses overhead charges as well, giving the nearest correct figures.*

overhead charges. Then there is the scientific method which means a thorough classification of every item.

In order to illustrate how each of these three methods work out let us take an average balance of \$500, and work it out under each of the three ways. Example "A" on page 95 indicates the laxity prevailing in some banks. In this instance the analysis shows a false profit on the account. In Example "B" on page 96 a profit altogether exorbitant was arrived at. In Example "C" on page 97 the advantages of closer accounting are apparent.

In Example "C" the unit cost of handling an item is twice that in Example "B" because the direct expenses, together with a proper proportion of the



overhead charges, have been added. In Chapter IV the importance of detailed distribution of this sort was emphasized. Note also the detailed statement of expenses in Example "C."

Any cost system involving the analysis of item cost also should be planned to entail a minimum amount of labor. In banks which are successfully analyzing accounts, investigation indicated that it is essential to keep a card record or a looseleaf record of each individual account, which will show at a glance the average ledger balance, the average amount of out-of-town items in process of collection, the actual loanable balance, the amount of interest paid, and the cost of collecting out-of-town items. This record also should provide for a notation of the supplies used by the account and the number of items handled, in order properly to distribute the administrative cost as shown on page 15. With this information at hand the profit or loss on an account can easily and readily be ascertained by calculating, as above described, the average rate percentage on loans and investments for the month. A record of this sort, giving costs for the first year of a cost system's existence in one bank, compared with costs in the fifth year, follows:

#### A RECORD OF COMPARATIVE COSTS

(Figured on Percentage of Time, Average Count of Items, and Expense Account)

	First Year 302	Fifth Year 301
Working days.....		
Commercial and Personal Accounts, Exclusive of Items		
Average balance per account.....	\$ 4,776.00	\$ 4,915.00
Average yearly overhead cost per account	36.61750	37.62504
Average daily overhead cost per account.	.12125	.12500
Average yearly overhead cost per \$1,000 of deposits.....	7.66476	7.65005
Average daily overhead cost per \$1,000 of deposits.....	.02538	.02541
Banks and Bankers (Country Accounts) Exclusive of Items		
Average balance per account.....	\$29,044.00	\$29,310.00
Average yearly overhead cost per account	43.81718	66.93902

# DISTRIBUTING THE ITEM COST

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	First Year	Fifth Year
Average daily overhead cost per account.	\$0.14509	\$0.22238
Average yearly overhead cost per \$1,000 of deposits	1.50698	2.28367
Average daily overhead cost per \$1,000 of deposits	.00439	.00758

## Average Cost of a Credit

Commercial and personal	\$0.04195	\$0.04216
Country	.03238	.03527
General	.04630	.01357

## Average Cost of a Debit

Commercial and personal	\$0.01516	\$0.01846
Country	.01213	.01384
Account items		.01378
Checks and drafts on other cities	.02580	.02516
Checks and drafts on New York	.01748	.00595
Cashier's check	.02977	.04454
Chicago draft	.10607	.10547
Certified check	.08761	.08059
Margins	.09585	.09987
Certificate of deposit	.10584	.07110
Cost of issuing draft—New York	.07630	.09146
Checks on city banks (clearings)	.00437	.00499
Banks clearing through First Trust	.00457	.00551
Bills discounted (department cost)	.77816	.74641
Bills discounted (total cost)		.79659

## Through Collection Department (Daily Count)

Collection	\$0.12261	\$0.18624
Time collection	.17858	.18800
Notes	.15254	.17692
Remittance collection	.13023	.14866

## Through Note Teller

Cash collection	\$0.05399	\$0.05995
Remittance collection	.09837	.16447
Ticket collection (credited when paid)	.07544	.16224
Notary item—department cost	.16757	.18227
U. S. depository deposit (silver and 5% fund)	.04926	.06075
Railroad teller (agents' remittance items)	.02670	.15876

## Currency

Incoming—cost per dollar to handle	\$0.00029	\$0.00031
Incoming—cost per \$1,000 to handle	.29245	.31447
Cost per shipment through express teller	.33043	.42194

In making up the cost unit these elements must be considered: (1) the expense of the departments that handle the items; (2) the expenses of the officers and

clerks who do not directly handle items; (3) clearing house costs; (4) postage; (5) telephone service and sundries. An effective method of finding and distributing these various costs is outlined in Chapter IV.

This brings us to the problem of finding the specific cost of handling an item. Let us take, for example, the following detailed statement of a state bank:

## ASSETS

Loans and discounts.....	\$409,944
Bonds and mortgages.....	184,646
Overdrafts.....	1,673
Internal revenue.....	186
Banking house.....	37,500
Furniture and fixtures.....	11,000
Other real estate.....	6,380
Due from banks and bankers.....	27,385
In transit.....	2,018
With reserve agents, and so forth.....	179,927
Cash on hand.....	84,953
	<u>\$945,612</u>

## LIABILITIES

Capital stock.....	\$ 75,000
Surplus.....	50,000
Undivided profits.....	11,043
Dividends unpaid.....	25
Individual deposits.....	280,318
Demand certificates.....	42,678
Savings deposits.....	349,770
Savings certificates.....	134,800
Reserved for taxes, interest, and so forth.....	1,978
	<u>\$945,612</u>

## EARNINGS

Interest.....	\$ 41,823
Exchange.....	1,197
Box rent.....	385
Rent.....	3,425
Other profits.....	2,555
Total.....	<u>\$ 49,385</u>

## STATISTICS

Dividends.....	\$ 7,500
Surplus.....	4,500
Undivided profits.....	1,389
Charged off.....	2,000
Expense (operating).....	14,757
Taxes and maintenance.....	1,950
Interest paid.....	17,289
Total.....	<u>\$ 49,385</u>

## DISTRIBUTING THE ITEM COST

To this statement should be added these general facts regarding the business:

	Commercial	Savings
Number of accounts.....	2,000	500
Average account (estimated).....	\$300	\$300
Interest on deposits.....		4%
Interest on loans.....	6.7%	
Number of employees and officers.....	10	
Average salary paid each per month.....	\$960	
Teller windows.....	3	1
Floor space (square feet).....	3,000	

It is interesting to note that while the commercial department in this bank has 2,000 accounts, the savings department has only 500. The general statement of the earnings by departments, treating certificates of deposit as included in the commercial department's activities, is as follows:

### COMMERCIAL DEPARTMENT

Total interest earnings.....	\$25,212.16
Interest on checking accounts.....	13,411.12
Interest on certificates of deposit.....	3,212.19
Proportion of general expense.....	2,624.18
Detailed operating expense.....	7,801.94
Net earnings.....	\$11,162.73

### SAVINGS DEPARTMENT

Total interest earnings.....	\$16,906.12
Interest paid out.....	7,218.06
Proportion of general expense.....	1,976.07
Detailed operating expense.....	3,419.08
Net earnings.....	2,292.91
Total net earnings.....	\$13,455.64
6% on capital, surplus, and profit.....	\$ 8,162.58
Actual net profit.....	5,293.06
Total.....	\$13,455.64

Net earnings equal 10.6% on capital, surplus and profit, or 16.2% on capital only.

Net profits equal 4% on capital, surplus, and profit, or 7% on capital only.

The next step is to make a record of the number of items handled by each department. If an item is handled twice in any department, the number so rehandled should be set down twice. This must be done so as to distribute the correct proportionate

amount to each department. The following distribution over a year is almost always sure to give satisfactory count of the number of items handled in the commercial and savings departments:

**Commercial department.** Number of cash deposits; number of checks and drafts on other cities; number of checks on other banks in your city; number of certificates written and cashed; number of post office orders; number of checks drawn on your bank.

**Savings department.** Number of cash deposits; number of checks and drafts on other cities; number of checks on other banks in your city; number of post office orders; number of withdrawal checks.

In banks which are determining a per item cost usually it is not found necessary to count the items over an entire year. The count over a normal month multiplied by 12 will probably be sufficient. Having this count, it is a simple step to take the cost of handling the items in the commercial department as listed under "detailed operating expenses" and divide this by the number of items as revealed by the count. This will give the cost of handling an item. The same method is followed in the savings department.

Investigation indicated that the cost of handling a commercial item varies from \$0.0158 in a large national bank in the Middle West to \$0.0314 in a country bank in Indiana with \$1,100,000 deposits. Between these two extremes is found the average cost of handling an item, say \$0.02, in the commercial department. But the cost of handling a savings item varies sharply from \$0.01 to \$0.06, investigation indicates, due mainly to the cost of developing new business.

In brief, the get-ahead banker must, if he is to continue to get ahead consistently, have a cost system that tells inexpensively and quickly just what the smallest detail of his business is costing, and why—thus indicating to him possible operating economies.

## **PART II**

### **CUTTING BANK COSTS**



## CHAPTER X

### INCREASING PROFITS WITH A COST ANALYSIS

**W**HEN the head of a manufacturing establishment was called into the office of the president of an eastern bank and told that his account was unprofitable to the bank, and would have to be increased and so maintained, he protested that he carried an average balance of \$20,000.

"Yes, I know that you carry such a balance," the president replied, "but the heavy volume of your checks in transit has reduced the loanable balance that we must have from day to day to make the account profitable."

The president then showed the depositor a 30-day history of his account (Figure 28). The record indicated the amount which the depositor had in deposit from day to day and also the outstanding amounts. Confronted with this evidence the depositor realized the justice of the banker's position and promised to make the account profitable, either by supplying heavier deposits or by borrowing from the bank and thus producing profitable business.

Day after day, week after week, bankers big and little are confronted by situations of this sort. Common to all banks is the depositor who immediately draws against his deposits of out-of-town checks as if they already were cash; the chronic overdrafter, who in effect borrows money without paying interest; the depositor who gets more interest than his account earns; and the depositor who gets excessive supplies of check books, pass books, and so on.



If abuses of this sort are to be controlled, it is essential to establish a detailed analysis of the accounts in each department. In many central reserve and reserve city banks the analytic department is one of the most important units of the organization. The small bank, it is true, does not require the elaborate analytic methods that the big bank does, but, nevertheless, the fundamentals of the method used in large banks undoubtedly can help the small banker to perfect plans of his own that will build up an effective system corresponding to the big bank's analytic department and still suitable to the size of his operations. In previous chapters the distribution and classification of costs and the determination of the per item cost have been considered. Since the control of the per item cost rests chiefly in a clean-cut analysis, let us find out exactly how to make such an analysis.

The prime function of the analytic department is to determine the profit or loss on accounts. The point to be determined, therefore, is the difference between the income derived from the account and the cost of handling it. The amount in transit must, therefore, be computed accurately since it has a direct bearing on the available balance in the bank's possession for lending or investing.

The methods used by a progressive western bank, which are much the same as those used in hundreds of other banks which check costs closely, illustrate how a single account can be thoroughly analyzed without much additional expense, once an effective system has been installed.

In Insert II, for example, is shown the form used in finding the profit or loss on an account. Note that under the caption "Amount in Transit for Collection" are columns headed "Two Days," "Three Days," and so on. Taking the remittance letters received on the last day of the month, the bank lists in the column

WITH  
**THE NATIONAL BANK OF COMMERCE**  
**IN ST. LOUIS**

Interest Acc't for

*J. E. Ashton*

Our interest month opens on the 21st of each month and closes on the 20th of the following month.

CHECKING BALANCE		OUTSTANDING	Date	INTEREST BALANCE	
DR.	CR.	TOTAL		DR.	CR.
	44 2	14 4	21		29 8
	40 5	13 8	22		26 7
	22 7	15 9	23		7 0
	11	12 1	24	11	
	11		25		11 —
	15 9	15 8	26		1
	16 8	34 1	27	17 3	
	13 8	7 6	28		6 2
	8	13 5	29	5 5	
	6 5		30		6 5
	13 9	50	31	36 1	
	13 9		1		13 9
	5 2	14 7	2	9 5	
	5 2		3		5 2
	21 7	42 1	4	20 4	—
	14 2	25 1	5	10 9	
	27 1	16 8	6		10 3
	13 —	12 8	7		2
	13		8		13 —
	32 4	33 2	9	8	—
	30 6	61 3	10	30 7	
	44 9	18 2	11		26 7
	42 3		12		42 3
	42 1	69 5	13	27 4	—
	12 7	17 6	14	4 9	
	9 7		15		9 7
	37 2	17 2	16		20 0
	10 9	22 4	17	11 5	
	15 2	20 —	18	4 8	
	13 5	32 4	19	18 9	
	9 1	14 6	20	5 5	
	618 2	594 9		205 3	228 6
					205 3
					23 3

TO YOUR CREDIT \$

**Figure 28:** In analyzing accounts it is essential to know the checking balance and the amount outstanding on the account daily. This compact form used by one bank makes it easy to determine the debit and credit figures and the interest the account has earned.

## 108      REDUCING YOUR OPERATING COSTS

headed "Two Days" the total of all items received on that day requiring two days to collect, in the "Three Days" column all items requiring three days to collect, and so on. In the tabulation on the right-hand side of the sheet, space is provided for the exchange and the other items that enter into the final calculation of determining the profit and loss for the month. A variation of an account analysis sheet is illustrated in Insert III. A condensed form of this analysis is shown in Figure 31. This condensed analysis is for ready reference when desired in place of the more comprehensive analysis records.

The costs in this bank's transit department are based on an average daily count of items and the percentage of time spent on each kind of bank work, the percentages being figured from an average of three days' work. The transit department time ticket in this bank consists of the following items:

	Mail Items	Tellers' Items	Collections	Discounts
Morning posting.....	x	x		
Indorsing and stamping.....	x	x	x	x
Sorting checks.....	x	x		
Listing.....		x		
B-X books.....	x	x		
B-X machines.....	x	x		
Scratchers.....	x	x		
New York letter.....	x	x		
Morning mail.....	x	x		
Marking exchange on tellers' items.....		x		
Collecting tellers' items.....		x		

These percentages are then used in connection with the total department expense, with additions for the pro rata cost of maintaining the following activities: timekeeping, old records, statements, machine repairs, auditing, in mail, general expense, out mail, service on mail, and letter files in the vault.

A record of time spent on each sort of work in the various departments is made and all work and expense in connection with transit items is added to the cost of

## INSERT II



such items, as the recapitulation table of the transit item costs indicates (Insert IV).

Having entered the time lost and the exchange cost of all business received during the month, each column is footed, the total of the two-day column is multiplied by two, the total of the three-day column is multiplied by three, and so on. Then the total of these figures is deducted from the total gross balances and interest is paid on the remainder. The total deductions divided by 30 show the average amount in process of collection each day. Having deducted from the average daily balance the reserve and the items outstanding, the bank then has the average daily loanable balance. Interest on this amount for 30 days, at the prevailing rate of interest, shows the amount of income from that source. The exchange charge is taken from the daily charges.

A SIMPLIFIED SYSTEM, SUCH AS THIS ONE, IS OFTEN  
MORE EFFECTIVE IN SMALL BANKS

Thus, the cost of the account consists of the interest paid on balances and the exchange cost on out-of-town items. The interest paid is taken from the ledger account and the exchange cost is obtained by footing the exchange cost columns on the analysis sheet, which has been filled out from day to day. The net profit or loss is the difference between income and expense.

This system has been found to be most effective for determining the value of country bank balances in reserve city banks, although it can be adjusted to fit any account. Many small bankers, however, find that a system of this type often is too elaborate to justify the expense of maintaining it. A plan that probably is more effective for smaller banks is illustrated in Figures 33 and 34. In Figure 33 the analysis provides for one month, while Figure 34, which is part of a card index system, summarizes the monthly results

for a year, so that they can be digested at a glance.

Many banks do not find it necessary or even desirable to analyze all the accounts, but nevertheless maintain analysis of the sort described as an effective form of insurance against possible waste. A large bank in the Middle West, for example, which uses an analysis like that shown in Insert II, finds that it is not necessary to analyze every account because the profit or loss condition of the account can be determined quickly and fairly accurately from the interest statement. If the margin is close or if there is an apparent loss, the account then is placed under the analytical microscope and the results, if revealing loss, are called to the attention of the depositor with a request to bring up the balance. This is backed up by facts and figures revealed in the analysis, as was the request put up to the business man, with the \$20,000 insufficient balance, mentioned at the beginning of the chapter.

This bank employs a modification of the so-called "per item" expense method. The general expense is divided into the following headings: loaning expense, item expense, operating expense not attributable to the handling of items, and capital stock expense.

The proportion of each element of expense incidental to their operation is charged against each department. This gives the departmental expenses chargeable to the four general divisions of the expense account. The next step is to determine what proportion of the expense is chargeable to the cost of handling items, an expense which is somewhat heavier in this bank than in many banks. This is accomplished by subdividing the item expense into the following: clearing house items, checks in the bank, transit items, country collections, coupons, bonds and money.

There is charged to these various classes of items the expense of the various departments concerned in

### INSERT III

Figure  
an a  
count  
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handling the items. The result obtained in each instance is divided by the number of items handled in the course of a year. This yearly item count is determined by an actual count of the items of the bank two days each week. This determines the item expense.

The next step is to determine the lending expense. This is done by adding the salaries of the lending officers to the expense of the discount, collateral, and credit departments, and the result is applied proportionately against the total amount of capital stock, and the total loanable balance of depositors. Expense that is not due to the actual lending of money or the handling of items, like donations, legal costs, and so on, is applied on all the accounts after making the capital account bear its proportionate share.

The handling of transit items has been greatly simplified by use of the numerical system. Before this plan was installed the operation usually consisted of writing a memorandum of the name of the last indorser, the name of the bank on which the check was drawn, and the amount.

In many banks a great deal of extra data, such as the number, the name of the maker, the date, and the complete list of all indorsements, formerly was kept, investigation indicated. But as a rule, however, banks no longer make this record but proceed on the theory that if they can give their depositors the amount and the place payable, the depositors should have all the additional data on their own records.

In Figure 37 you will find an example of an old-fashioned record written in longhand. This record required much more stationery than is used in the numerical system and it also took a great deal more time and labor to handle.

While the description of transit items was made in longhand, there naturally was a call for abbreviation. Much of this abbreviation was inaccurate, and as a

CONDENSED ANALYSIS OF ACCOUNT OF										A/c opened	
Volume of Business	Average Balance	Amount in Transit	Eastern Funds Deposited	Gross Value of Account	Cost of Account	Net Value	Minimum	Maximum			
Jan.											
Feb.											
Mar.											
Apr.											
May											
June											
July											
Aug.											
Sept.											
Oct.											
Nov.											
Dec.											
Total											

CROCKER NATIONAL BANK SAN FRANCISCO, CALIFORNIA

Figures 31 and 34: These condensed analysis cards save time and labor. They are especially valuable for accounts of country bankers.

MARSHALL AND ILSLEY BANK																																																																																				
Milwaukee, Wis.																																																																																				
ACCOUNT ANALYSIS																																																																																				
<u>Henry National Bank</u> <u>of Hale, Mo.</u> MONTH OF <u>Feb.</u> 191 <u>8</u>																																																																																				
Remarks:																																																																																				
<table border="1"> <thead> <tr> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>COST</th> <th>INCOME</th> </tr> </thead> <tbody> <tr> <td>Average Balance</td> <td>75</td> <td>525</td> <td>Exchange</td> <td></td> <td></td> <td>40</td> <td>00</td> </tr> <tr> <td>Average Amount in Transit</td> <td>10</td> <td>900</td> <td>Interest Paid</td> <td></td> <td></td> <td>110</td> <td>80</td> </tr> <tr> <td>Loanable Funds</td> <td>65</td> <td>225</td> <td>Interest on 80% of Loanable Funds at 5%</td> <td></td> <td></td> <td></td> <td>22</td> <td>66</td> </tr> <tr> <td></td> <td></td> <td></td> <td>Interest on 12% of Loanable Funds at 2%</td> <td></td> <td></td> <td></td> <td>13</td> <td>48</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>150</td> <td>80</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>23</td> <td>14</td> </tr> <tr> <td></td> <td></td> <td></td> <td>Profit</td> <td>87</td> <td>34</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>Loss</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>																COST	INCOME	Average Balance	75	525	Exchange			40	00	Average Amount in Transit	10	900	Interest Paid			110	80	Loanable Funds	65	225	Interest on 80% of Loanable Funds at 5%				22	66				Interest on 12% of Loanable Funds at 2%				13	48							150	80								23	14				Profit	87	34						Loss				
						COST	INCOME																																																																													
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							23	14																																																																												
			Profit	87	34																																																																															
			Loss																																																																																	

Figure 33: The profit and loss in an account can be figured quickly by using this form. True, the details must be taken from the transit records, but it provides a graphic showing of cost and income.

**INSERT IV**



rule, no two abbreviations of the same name were alike.

The banks, which have incorporated the numerical plan into their transit systems, give their customers a special indorsing stamp. With the use of this numerical stamp the description of the transit letter shown in Figure 37 now reads as shown in Figure 38.

Moreover, under the old system it was difficult to tell just what might happen if a check was lost or if an abbreviation was not clear. If the clerk who had handled it was not present, it was difficult to tell. And this was not a rare occurrence—it happened every day in banks everywhere.

Where each depositor, who regularly deposits items payable out of town, has been provided with an indorsing stamp bearing a number allotted to his account, card records like those shown in Figure 35 are kept on file, alphabetically as well as numerically.

IN THIS INSTANCE ADDRESSING MACHINES REDUCED  
MAIL-HANDLING COST \$1,000 ANNUALLY

A national bank in the Middle West, which has installed this system, has gone a step further in perfecting it. Its day letters are now run through an addressing machine. This work, done by one operator, formerly required the services of three clerks who had no mechanical aids. This plan alone has reduced costs about \$1,000 annually. The machine plates bear the number of the A. B. A. Bank and this number is printed both on the letter and the carbon copies—thus identifying the duplicates.

The letters and files are arranged alphabetically and as the folders in the filing cabinet bear both the name of the bank and its number, there is no trouble in filing the copies. In addition, a bookkeeper, if delayed for any reason, need not hold up transit letters, but can post from the carbon copies, as the various accounts also carry out the A. B. A. number scheme.

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A natural outgrowth of this plan is the new method of conveying "No Protest" instructions from the first indorser to the paying bank by means of a special stamp carrying the A. B. A. number of the indorsing bank (Figure 35). There has been more money lost by protesting through error than there has been on account of failure to protest, bankers agree, and transit clerks generally, investigation showed, are squarely back of the numerical system because there is less danger of forfeiture of part of their wages owing to mistakes on protested items.

Back of any satisfactory analysis is an accurate determination of the administrative and operating costs as outlined in Chapter IV.

During the investigation involved in the preparation of this volume the president of a bank in Iowa, with deposits of about \$600,000, said he had no salary charge to speak of, because he and his son, the cashier, took their main income from dividends on their stock; that he had no rental expense because he owned the building; and that he kept no record of the purchase of supplies or of the miscellaneous expenses.

"I spend about \$15 a month for postage and envelops," he explained. "I buy everything as cheaply as I can and I practice every economy."

There are hundreds of small banks throughout the country conducted along much the same lines that prevail in this Iowa bank. Obviously an analysis method, no matter how simple, would be practically useless in such a bank. If an analysis system is to produce satisfactory results, the banker must begin, first of all, to classify his costs and compute them carefully, as was set forth in Chapter IX.

In contrast to this haphazard method of management let us take the analysis methods of a progressive country bank in the Northwest, which has deposits amounting to \$1,500,000.

Chicago, Ill. \_\_\_\_\_ 191\_\_ No. \_\_\_\_\_

**Merchants Trust and Savings Bank**

Pay to the \_\_\_\_\_ \$ \_\_\_\_\_

~~N~~  
2-12  
~~P.~~

Dollars

PAY TO THE ORDER OF  
**MERCHANTS NATIONAL BANK**  
1520 CHICAGO, ILL. 1520  
Samson, Brown & Co.  
CHICAGO  
GEORGE W. BRONSON TREAS.

Figures 35 and 36: This method of indorsement by number (shaded form) saves time. The other illustrates the use of a "no protest" stamp.

**SAMSON NATIONAL BANK**  
CHICAGO, ILLINOIS

Date Oct 29-17

We enclose for collection and returns the following:  
Please remit in Chicago Exchange.  
Wire non-payment of items \$500 or over.  
**DO NOT HOLD; BUT RETURN AT ONCE ALL ITEMS NOT PROMPTLY PAID.**

Respectfully  
**GEO. W. HILSON,**

First Nat Bank  
St Louis Mo.

**DO NOT PROTEST**  
Items 10.00 or over ~~✱~~  
Items marked ~~✱~~  
Items similarly marked by a prior endorser  
Items herein listed "no pro"

**PLEASE REPORT BY THIS LETTER B AND DATE**

410 20	Springfield Ill.	1st Nat. Hermin Ill.
85 10	Ashdown Ark.	Com. Nat. Bloomington Ill.
16 00	Houston Texas	Spring Nat. Mo.
5	New Orleans	1st Nat. Decatur Ill.
3	Jackson Miss.	New Nat. Cedar Rapids
28	Memphis Tenn.	Guard Nat. Phil.
1000	Jacksonville Fla.	Pro. St. Detroit
9460	Saxahatchee Tex.	Com. Nat. Los Angeles
810	Farmington Mo.	Ohio Sav. Toledo.
17	Pineknolls Ill.	Stock Yeo. Louisville
505	Evansville Ind.	Mer. Nat. Peoria
167205		

41020 70 32	70 328
8510 81 218	70 107
1800 35 6	1 67
500 14 97	71 366
300 85 30	47 1
2800 28 61	3 13
100000 63 4	910
9480 88 183	16 17
810 88 270	56 10
1700 70 533	21 56
505 71 1	70 7
167205	

Figures 37 and 38: At the top is shown the old pen-and-ink method of writing a transit letter, which often developed errors. The new way makes use of a machine, which designates each bank by a number.



MONTH OF \_\_\_\_\_

**TOTAL TRANSACTIONS AND DISTRIBUTION OF COSTS OF EACH**

	No. of Trans.	Time Used per 100 Trans.	Total Trans. Hours	Trans. Hour Cost	Cost per	Mo. Avar.
<b>TOTAL CHECKS, With</b>		X 106.7 M	60 --			
+ Clearings		X 17.5 M	60 --		Check	
+ Remittances		X 78.7 M	60 --			
+ G.L.D. Rem.		X 120. M	60 --			
+ G.L. Cr. Bk. slips		X 194.7 M	60 --			
Exchange		X 150. M	60 --			
Other G.L.		X 150. M	60 --			
<b>TOTAL CHECKS CHARGES</b>						
<b>TOTAL DEPOSITS, With</b>						
+ Clearings		X 17.5 M	60 --			
+ Remittances		X 78.7 M	60 --		Dep.	
+ G.L.D. Rem.		X 120. M	60 --			
+ G.L. Cr. Bk. slips		X 194.7 M	60 --			
<b>TOTAL DEPOSIT CHARGES</b>						
<b>BILLS RECEIVABLE, With</b>						
G.L. Cr. B.R.		X 244. M	60 --		B.R.	
Box Rent		X 112. M	60 --			
		X 112. M	60 --			
<b>TOTAL B.R. CHARGES</b>						
<b>C. D. 'S - Demand New</b>						
Time Paid		X 194. M	60 --		C.D	
Time New		X 194. M	60 --			
Time Paid		X 194. M	60 --			
G.L. Int. Pd. Slips		X '60. M	60 --			
<b>TOTAL C. D. CHARGES</b>						
<b>DRAFTS, With</b>						
2% G.L. Dr.		X 200. M	60 --		Draft	
2% G.L. Cr.		X 120. M	60 --			
		X 194.7 M	60 --			
<b>TOTAL DRAFT CHARGES</b>						
<b>GRAND TOTALS</b>						

Total bank cost \_\_\_\_\_  
 Total transaction hours \_\_\_\_\_  
 Cost per transaction hour \_\_\_\_\_

NOTE: In bringing the numbers of transactions on this sheet give DRAFTS a percentage (this to be figured monthly) of General Ledger Debits and General Credits, the balance of these items to be divided equally between checks and drafts.

Figure 39: Here is a typical method of distributing costs on the basis of transaction hours in order to determine with comparative ease the "per item" cost. The items are divided into these five groups: checks, deposits, bills receivable, certificates of deposit, and drafts.

When this bank moved into its new \$125,000 building the officers decided to keep close track of expenses and a simple analysis system was installed to determine the cost per process over a certain period. Cost statements are submitted to the board of directors once a month. These statements are kept in a file and form the basis for the annual expense statement. A typical statement of the expense groups for one month follows:

## BUILDING EXPENSE

	Totals	Extensions
Rent.....	\$ 849.76	
Heat.....	46.08	
Janitor service.....	65.00	
Building repairs.....	99.80	
Total.....	\$1,060.64	\$1,060.64

## VALUATION EXPENSE

Replacement of funds.....	\$ 83.34	
Interest on investment.....	50.00	
Insurance.....	00.00	
Taxes.....	10.68	
Total.....	\$ 144.02	144.02

## OFFICE EXPENSE

Executive salaries.....	\$1,458.32	
Clerks' salaries.....	645.00	
Telephone and telegraph.....	19.79	
Postage and supplies.....	405.84	
Federal and corporation taxes.....	000.00	
General expenses.....	56.49	
Organization dues and miscellaneous.....	000.00	
Printing.....	15.00	
Advertising.....	175.47	
Donations and repairs.....	000.00	
Light.....	16.36	
Freight and express.....	000.00	
Overdrafts.....	000.00	
4% on moneys in other banks.....	125.99	
Interest on idle money.....	530.80	
Loss on money loaned.....	000.00	
Department payroll.....	000.00	
Total.....	\$3,449.06	3,449.06
Grand total.....		\$4,653.72
Total number of processes.....	30,012	
Cost per process.....	\$ 0.15506	

The charge of \$849.76 for rent seems extraordinarily high. This, however, represents the actual cost of

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maintaining the building and consists of these items:

a. Interest on money invested in the ground on which the building is located.

b. Interest on money invested in the building itself.

c. Replacement of capital invested in the building itself. (It is figured that the building should pay for itself within its probable period of existence.)

d. Actual taxes paid on building and grounds.

e. Insurance on building. (The rent item really is equivalent to a normal rental with possibly a small additional charge for profit which would be charged for the building if it were occupied by a tenant).

The salaries of the executive officers are paid monthly. They are well paid, but they do not anticipate the dividend period for the bulk of their income.

Taking every detailed item of expense into consideration the operating costs of this bank are less than 3% of the total deposits. Executive salaries and the rental charge are probably higher than in many other banks of the same size.

This plan of tabulating expense simplifies the problem of determining the cost of handling items. A plan based on "transaction hours" (Figure 39) has been evolved in which the unit is the time required to carry a check, a deposit, a draft, and so on, through the usual channels of the bank, including all the processes involved. The units are divided as follows: checks, deposits, bills receivable, certificates of deposit, and drafts. As a basis for computation 100 transactions under each of the five classes are taken as a standard, and the bank thus is able to get the exact time required to handle each class in a given period. With drafts, a certain percentage—figured monthly—of the total time devoted to general ledger debits and general ledger credits is charged against checks and deposits, one half to each.

# THE NATIONAL FARMERS BANK OF OWATONNA

## CUSTOMERS ACCOUNT ANALYSIS

Month of \_\_\_\_\_ 191 \_\_\_\_\_

### CREDIT

\$ \_\_\_\_\_ Average daily balance @ \_\_\_\_\_ % \_\_\_\_\_ \$ \_\_\_\_\_

### Debits

Cost of handling \_\_\_\_\_ checks \_\_\_\_\_ \$ \_\_\_\_\_

Cost of collecting \_\_\_\_\_ out of town checks \_\_\_\_\_ \$ \_\_\_\_\_

Interest on average overdraft \$ \_\_\_\_\_ for \_\_\_\_\_ days @ \_\_\_\_\_ % \$ \_\_\_\_\_

Cost of handling deposits \_\_\_\_\_ \$ \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

Total cost of conducting account \_\_\_\_\_ \$ \_\_\_\_\_

Net loss for month \_\_\_\_\_ \$ \_\_\_\_\_

Net profit for month \_\_\_\_\_ \$ \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_

Figure 40: With costs definitely determined, as indicated in Figure 39, a progressive Minnesota banker has no difficulty in finding out how much it costs to handle the individual account. Note that in this bank customers are charged interest on overdrafts.

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In addition to this, taking the check group, for example, the time used for out clearings and remittances also is figured and charged against checks as well as exchange operations and miscellaneous items.

The number of transactions during the month under each of these headings is then multiplied by the time required for handling 100 such transactions, as already determined. These totals are then divided by 60 and translated into transaction hours. These transaction hour totals are then added and from them, for example, the total transaction hour cost of handling all checks for the month is determined.

The cost of handling each deposit, bill receivable, certificate of deposit, and draft is ascertained similarly and the total cost of all transactions should balance against the bank's monthly statement of expense. In a recent month, for instance, the cost to a bank using this method for each actual hour of business was \$8.96.

With the information obtained by this analysis of expense, this bank has a definite basis for determining accurately the cost of handling an account. When an account drops below the required minimum amount, or shows costly activity, it is easy to determine its actual condition. For example, one account with an average daily balance of \$810 showed a loss because there were 234 checks drawn against it in one month and 11 deposits placed to its credit. Having determined the cost of handling the checks and the deposits, the expense calculation was simple (Figure 40).

"More than 15% of the accounts which were costing hundreds of dollars annually are showing a profit since we started to put them under an analysis," declares the president of this bank. "Armed with facts produced by our cost analysis, we now are able to show depositors conditions as they actually are. We have driven home the fact that the writing of a great many small checks usually is not good business for us."

## CHAPTER XI

### HOW A MAIL SYSTEM CAN CUT THE ITEM COST

**T**HE cashier of a bank in northern Ohio not long ago sent out a certain item for collection. The country banker to whom it was sent did not acknowledge the receipt of the letter and the large bank followed it up with an inquiry. But there was no response until after four letters had been sent. Then the country banker made this acknowledgment, using a corner of the big bank's letterhead:

"Letter received. Same will have our attention."

This was the answer for which the big bank spent 8 cents in postage and probably as much more in stationery, not counting in labor. Nor was this all the cost. It was necessary to send five more letters urging action on the item before it was finally returned with the bare explanation that collection could not be made.

"This careless method of attending to correspondence prevails in altogether too many banks," said one banker. "It is this sort of indifference that helps to increase postage costs and the cost of distribution and handling of mail. In any bank the mail should have immediate attention because time that is lost handling the mail often causes serious loss in interest, collections, and exchange."

It is true that the mail in the small bank is light when compared to that of the big bank, but the small bank nevertheless will find it profitable to give the mail problem the same sort of attention that it receives in metropolitan banks.

The handling of the mail has a direct relation to the profits, investigation indicates. In securing the sort of prompt dispatch of business through the transit department as described in the previous chapter, it is essential to keep the mail moving quickly in order to avoid the loss of time which means lost interest. It is necessary also, bankers agree, for banks of every size to understand how to route their items so that the greatest saving of time will be effected. Inattention to this important detail causes loss that often runs high.

The plan of a national bank which handles approximately 10,500 pieces of outgoing mail daily in a little more than an hour saves \$5,000 yearly in postage alone. By speeding up the items to the transit department, this method also has heavily increased interest earnings.

At 4 o'clock a red light goes up in the transit department, signifying that all checks in that department are in. Clerks then close the books and start footing. Fifteen minutes later the mail collector starts his collection, using a large basket and going from one desk to another. He brings in all the mail to a sorter, who has a single large desk on which he sorts the mail in alphabetical divisions according to the city to which the items are addressed.

From the sorter's table the items go to mail boxes. All items for a single bank are placed in one envelop. Each division is in charge of a man. For example: There are alphabetical divisions A and B, C and D, E, F, G, and H, I, J, K, and L, and so on. The items are sorted in piles accordingly. The man having division A and B knows just where his items will be—in which pile. As soon as he has sorted one pile he goes to the table and takes another pile, and so on.

This bank has 1,750 regular correspondents. Long envelops are stamped with the addresses of the correspondents and an adequate supply is kept on hand at all times. "Transparent" (window) envelops of

smaller size are kept on hand for items going to banks which are not regular correspondents.

When the sorter comes to an item not addressed to a regular correspondent he throws it aside and when the regular correspondence is cleared away he carefully places these items in "transparent" (window) envelopes. They are then ready to mail.

The mail boxes extend in long rows along the wall. Each box is labeled with the name of a bank, alphabetically arranged. In this way the sorter has comparatively small space on which to work. He does not need to walk around, as he is within arm's length of all the boxes in this particular division.

Each mail box is about six inches high and as wide as an ordinary envelop. There is a two-inch space at the bottom for the addressed envelopes. When all the mail is sorted and placed in the boxes, the men are given a signal from the general sorter. They then begin to pull out envelopes (thumb opening facilitating this movement) and insert the proper correspondence.

HERE ARE THE DETAILS BEHIND A SPEEDING-UP PLAN  
THAT SAVES \$5,000 A YEAR IN POSTAGE

The mail in each division is then tied up and is ready for sending out. Extremely large items are marked and set aside. These are sorted out by the head of the mailing department and usually are registered. A special messenger takes these pieces direct to the train and mails them.

This bank has on hand at all times a big supply of special postcard-size forms, the name of the bank being either printed or stamped as an address. On the reverse side is a statement of the amount the bank credits to the correspondent together with exchange charges, and, at the bottom, the amount charged back, and whether returned, handed to some notary, or entered for collection.



To save postage these cards are placed in the regular daily mail and enclosed in the same envelop. At times it is, of course, necessary to send many of them out as separate mail. On the whole, however, much postage is saved. All outgoing items are listed on a letter form by the transit clerks in charge of each subdivision (Insert V). These letters are in triplicate in large, looseleaf binding. Each sheet comprises 20 of these letters, perforated so that they can be easily detached. The first form, which is white, remains as the bank's record, the second form, which is yellow, goes out with the item, while the third form, which is pink, is used for keeping a record of the outstanding items. The pink forms are kept in order of date by the transit clerk, who checks them with remittance items and makes up a credit and debit scratcher.

The transit clerk sorts the various items according to towns in his subdivision and handles them in alphabetical order to facilitate the work of the mail clerks. All outgoing items are entered, the letters proved against the list of items, and then they are set aside for the mail collectors.

In handling the incoming mail, a force of employees gets to the bank at 5 o'clock in the morning. All letters are sorted and those addressed to the bank—and not to officers or employees personally—are opened immediately. The various items are separated into these four divisions: New York items, city collections, clearing house items, and transit items. All [currency and coupons are separated from other items.

This work is done by the incoming mail "tellers," who, in this bank, occupy four large desks. The teller at this point performs the work of separating the items. He proves each batch of letters.

From the incoming mail department the items go to the mail checker, who proves against the incoming teller and sorts to various departments. The items

**INSERT V**



are then run off on an adding machine. Two men do this work. The items are charged to the transit department to which they are sent at once.

The items are taken by a "scratcher man," who proves each one, and then sends them to another sorting desk. Here they are sorted to specially devised boxes, each indicating a subdivision. For example, Illinois makes up one subdivision, Indiana another, Arizona and New Mexico another, and so on, according to the division. The divisions are based on the time required for mail delivery, and the method of routing. Each box is equipped with a little barred door on its back. As soon as a batch of items is sorted out the man in charge of the subdivision desk corresponding to the box removes them.

With this method of handling mail this bank saves thousands of dollars yearly over the old system. The savings, of course, has been largely represented in postage and in interest.

Let us see how other departments handle their mail. As soon as the mail is brought in by the bank's watchman and messengers it is examined by the head messenger and an assistant. It is then carefully sorted to the following:

Officers	Receiving tellers
Discount clerk	Note teller
Foreign department	Collection tellers
General bookkeeper	Transit department
Payer	Cash remittance letters

It is opened and given to the chief clerk for distribution. Clerks then examine it for "no protest" items, which are deducted from the mail total. Papers requiring special attention are deducted from the total and the name of the clerk concerned is affixed to them. These are placed in items conforming to the accounts.

Cash remittance letters and enclosures go to operators of adding machines who list from the items and

prove each separate letter. These are collected by the various bookkeepers and posted.

Meanwhile operators recapitulate totals from their proof sheets or scratchers, showing the total of every letter, against which the bookkeeper must balance his figures for the day.

Remittances affecting the general books and also the discount department then are checked, the enclosures being retained by the adding machine operators, who itemize them. The letters are then given to the departments mentioned for posting.

Combined totals are proved in the same way as cash remittance letters. City mail remittances are handed to the receiving tellers and are listed in the balance book and proved carefully before merging into the "morning mail."

Remittances belonging to the collection department are checked by the general bookkeeper or his assistant and handed to the collection teller, who marks off his records the collections they represent. Meanwhile the drafts received in payment are written up with the machine. This total must agree with the amount called for by the credit or remittance tickets of the teller in charge. These also are held in check by the proof sheet.

Through the transit department, of course, go all items payable at banks where no reciprocal account is kept. While adding machine operators are writing the clearings the settling clerk and his assistants are stamping and distributing checks in cases numbered to correspond with other banks' clearing house numbers thus facilitating the work.

During this time the mail teller is separating city collections and foreign items. These are then examined for rates of exchange and for indorsements. They are written in letter form and balanced to the previous totals. The note teller receives all city cash col-

lections, sight and demand, which as a rule are credited subject to final payment.

Every proof sheet, exclusive of clearings, is written up in exactly the same order as the items appear when typewritten in letter form ready for mailing.

In many banks form letters are used to facilitate the work of the various departments. The letters usually are printed in imitation of typewriting and a supply is kept on hand in folders. When the occasion demands instructions are issued to the girl in charge of the files and a letter is sent out. Here are five ways form letters are used to expedite one bank's operations:

When a difference is detected between a pass book and the records of the bank, the girl in charge is given the name of the depositor and the number of the pass book, which are inserted in the form letter, which carries a request to forward the pass book for correction. A letter of this sort follows:

Dear Sir:

Will you kindly mail us your savings pass book number 129, using the enclosed stamped envelop, as there appears to be some difference between your pass book and our records. It will be returned to you as soon as possible.

Your prompt attention will be appreciated

When there appears to be a misunderstanding about the number of the pass book the customer is requested to insert the correct number on an enclosed postal card. Here is such a letter:

Dear Sir:

Kindly insert the correct number of your savings pass book on the enclosed postal card, and return it to us at your earliest convenience.

When a commercial signature card is missing from the files the customer is requested to return it to the

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bank, if it is in his possession, or, if not, to sign and return an enclosed postal card. The letter follows:

In checking over our commercial signature cards we find that your card is still missing from our files. If it is in your possession, will you please sign it and return it to us at once? Otherwise, kindly sign and return the enclosed card.

When the signature on the bank's books differs from that customarily used by the customer, he is requested to sign his checks and deposit tickets in accordance with his signature card, or to forward to the bank an enclosed signature card filled out to meet his revised wishes. The letter sent reads:

Dear Sir:

Your account on our book reads "L. M. Hogarth" which corresponds with your signature on file. We notice you are signing your checks "Lewis M. Hogarth."

In the interest of accuracy and to avoid confusion in our bookkeeping department we shall appreciate it a lot if you will sign checks and deposits tickets in accordance with the signature originally submitted by you when the account was opened, but if you desire to make a change, please forward to us the enclosed signature card filled out to meet your present wishes and we will gladly change our records accordingly.

An early reply will be appreciated.

When a change of address is noted on a deposit ticket, a "change-of-address" card is enclosed in a letter with a request to return it as soon as possible with the proper address. The letter reads:

Dear Sir:

We have your address recorded as it appears on the envelop covering this letter, while we notice on your last deposit ticket you gave it as 6802 Lampson Avenue.

If this later address is now correct will you kindly fill out the enclosed change-of-address slip and mail it to us at your earliest convenience. Thanks.

The purchase and handling of postage stamps are an important detail in many banks. Banks usually buy stamps in large quantities and the problem of checking on them has been facilitated by the use of machinery in sealing and stamping as described in Chapter X. The classification and filing of correspondence also has been simplified and is described in detail in the same chapter.

This chapter, then, shows how mail is handled in progressive banks, and the process is interesting because it illustrates the necessity of organized action in taking care of this important detail even in smaller banks. Of course, all the details of a system of this sort may not be adaptable in all banks, but it emphasizes the necessity in every bank of working out a system that will both keep down mail expense and watch the interest item effectively.



## CHAPTER XII

### HOW CAREFUL BUYING REDUCES COSTS

**I**N order to control purchasing rigidly, special departments have been installed in the majority of banks in "reserve" cities, investigation indicated. In banks which do not have a special purchasing department the task usually is delegated to a member of the executive staff, who studies the requirements of the bank, keeps in touch with prices, and provides for economical distribution of supplies to the various departments.

The extensive use of machinery, the growth of advertising, and the broad service to customers created by competition, naturally have compelled banks of all sizes to make larger purchases of many supplies. The development of direct advertising, for example, has sharply increased postage and stationery expenditure, and the organization of thrift clubs makes it necessary to provide stationery forms of different sorts, all in all totaling a big item of expense. The increasing number of small savings accounts has hastened the introduction of machinery and the purchase of these rather expensive mechanical aids constitutes a vital problem. But the intelligent use of machinery can almost always be made profitable. An investment of \$16,455 in machinery for one bank, for example, saved \$54,900 in one year and removed the necessity of renting more space, since the machines displaced men and facilitated the accounting. The following table shows the number of machines purchased and how the saving was made:

Type of Machine	Number of Machines	Cost of Machines	Clerks Replaced	Monthly Saving
Adding machines.....	14	\$6,725	40	\$2,800
Adding and typing machines for handling transit letters.....	10	3,050	15	1,050
Typing machines for the collec- tion department.....	2	170	1	60
Bookkeeping and statement machines.....	8	5,240	5	425
Non-listing adding machines...	3	695	2	120
Addressing equipment.....	1	175	1	60
Stamping and sealing machine..	1	400	1	60
Totals.....	39	\$16,455	65	\$4,575
Total annual saving.....				\$54,900

Before purchasing this machinery the vice-president of this bank asked all the manufacturers of bank machinery for catalogs, prices, and testimonials from other bank users. This literature was filed, first according to the type of machinery, and then alphabetically. Adding machines, for example, were grouped in one lot, posting machines in another, and so on.

The vice-president then picked out the machines which he believed best suited to the needs of his bank. He did not order them definitely, but suggested to the manufacturers that he would like to give the machines a test. These tests lasted all the way from a week to a month and when they were finished, he knew exactly what to expect from the machinery and was able to purchase intelligently.

In this bank, as in practically all banks, the original cost and the upkeep of machinery is one of the big purchasing items that requires a constant check-up if economy is to be enforced. It is interesting to contrast the instance of the banker already mentioned with that of the president of a Pennsylvania bank, which has about \$1,400,000 in deposits. This Pennsylvania banker decided to eliminate the pen-and-ink method of accounting in favor of machines. He bought machinery for every department without finding out exactly what it could do for him. He bought three small machines for use in the teller's cage, but the



teller did not have room enough to operate them all, so two were taken to the basement, and it was necessary to do the same with some of the other machines.

"I purchased \$4,200 worth of machinery," this man explained, "and I was sadly disappointed when I found I could not use all of it. About half of this machinery is in operation and I must hold the rest of it until I remodel my banking room before I can place it effectively. I realized the machinery would do great things for me in simplifying my labor problem, but I failed to determine just what I needed and the expense was unnecessarily large."

While the purchase of machinery usually is governed largely by the wishes of the men who are to use it, the purchasing department or the officer in charge of purchasing can obviously be of great advantage in selecting the most effective type of machine. Since the purchasing officer is usually more likely to be familiar with the various machine models and their accomplishments, just where they are successfully used, and the selling prices, his advice usually will help to insure satisfactory and economical machines.

There are, of course, many details to be observed in the regulation and accounting of a really effective purchasing department, and the more simple the method of its accounting, the better, because fewer records enable the department to make reports both monthly and annually in a concise manner. The necessity of digging into a set of big books to get at the facts is eliminated by the purchasing department of a southern bank. The procedure followed in this department is:

1. Receipt of requisition from department O.K.'d by head of the department (Figure 42).
2. Issuance of order (awarded to lowest bidder normally). The form used in this instance usually

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consists of a personal letter from the bank to the bidder, although the form indicated in Figure 43 also is used extensively.

3. Receipt of goods and the checking of bill with order, and filing of both.

4. Entry of item with all details on a stock record card, and the consignment of the goods to the proper storage place.

5. Payment of bill and proper entry in record. Bills are paid in this bank with a special check like that shown in Figure 45. Note that this check to be valid requires the approval of the manager of the purchasing department.

For the convenience of each department and in order to keep its records complete, an expense statement (Figure 46), showing the expense classified, is sent to each department monthly and a check is given in return which is credited on the books of the financial department to the account of the publicity and purchasing department.

### ADVERTISING CUTS RUN INTO MONEY AND SHOULD BE TREATED ACCORDINGLY. HERE'S ONE BANK'S PLAN

A simple way to keep an effective record of special check books for depositors is to have a small, ring-binder book giving the order number, the date, the name of the depositor, the name of the firm printing the book, a description of the book and the total cost. Such a record shows at once the number of the previous order and this can be referred to for details which otherwise might require a great deal of time to look up.

It is important to watch the distribution of check books closely because they usually range in price from 12 cents to 60 cents each and in the course of a year are a heavy expense. Because the bank gives them away without charge some depositors fail to attach



**Figure 44:** Costs in one bank have been reduced by this arrangement and equipment in the clerical department. Machines help to minimize labor expense and a long "trough" is an aid to getting the work distributed. In the rear are cabinets for sorting checks quickly.

**Mississippi Valley Trust Company**  
**PUBLICITY AND PURCHASING DEPARTMENT**

St. Louis \_\_\_\_\_ No. \_\_\_\_\_

Pay to the order of \_\_\_\_\_ \$ \_\_\_\_\_

DOLLARS

APPROVED: \_\_\_\_\_

MANAGER PUBLICITY AND PURCHASING DEPARTMENT \_\_\_\_\_ ASSISTANT SECRETARY.

Figure 45: The check here shown is used by the purchasing agent of one bank to simplify his purchasing record.

<p style="text-align: center;"><b>LINCOLN TRUST COMPANY</b>  <b>MONTHLY EXPENSE STATEMENT</b></p> <p style="text-align: center;"><i>Savings</i> Department, to Publicity and Purchasing Department, Dr.  <i>July 1918</i></p>										
Check No.	Items	Advertising	Stationery	Fuel	Light and Power	Library	Postage	Furniture and Fixtures	General	Total
802	144 Booklets "Huffe"	18.00								
803	544 Booklets	9.00								
804	1044 Deposit Slips		6.00							
805	544 Lig. Cards		3.00							
806	Heath Fuel & Ice Co.			16.20						
807	Cyrus Lighting Co.				26.12					
808	2 Vol Savings Library					3.00				
809	U. S. Government						33.12			
810	Benson Furniture Co.							12.50		
812	Lord & Co. (Adjusting table)								2.00	
813	Women's Social Club								1.50	
										130.44

Figure 46: A monthly record of all the purchasing is kept on a convenient form like this. The number of each check issued is included. Thus complete, classified figures of this expense are always available.

any value to check books and they do not hesitate to make repeated requests for expensive book binders.

The general stationery expense is a constantly increasing factor in the cost problem of many banks, investigation indicated. Booklets, blotters, and other forms of advertising matter, not counting the envelopes and letterheads that are used, constitute this expense, and it is one that requires constant supervision. Also there are the forms used in the different departments. Many banks practically operate their own printing shops by contract with a printing firm. All the stock is purchased under the direction of the head of the purchasing department, who also has complete charge of the making of the stationery. When a job of stationery is finished by the printer, it is sent to a store room and the man in charge of this room gives a receipt for it. When a department of the bank wants any particular form not in stock an order similar to that shown in Figure 48 is made out in triplicate. One sheet, white in color, goes to the supply department, the second sheet, yellow, is retained as an office record and the third sheet, salmon, becomes the department record. These orders are numbered consecutively and in case of a "void" or "destroyed" form, a full explanation must be written and placed in the files in its place.

This method of drawing supplies is typical of the methods prevailing in many banks. In Figure 47, for example, are shown two simple forms that have been found effective in controlling the distribution of supplies. Note that on one the applicant is advised that requisitions will be honored only between certain hours. One of the largest supply items in banks is high grade paper. "Within one year after instructing one of my assistant cashiers to study the paper market so he could buy intelligently," said the head of a southern bank, "we saved more than \$3,000. In place



of buying paper that cost 18 or 20 cents a pound, he found stock just as good for our purpose at 11 cents a pound. He found by investigating the market that high grade paper had increased from 50% to 100% in three years. Paper that formerly sold at 7 cents was costing 15 cents and that which usually sold at 12 cents was worth 20 cents. At first, we decided to reduce the weight of some of our stationery, especially that used on form letters. That is, where we formerly had used a 20-pound folio for our 8½ by 11 forms, we decided to adopt the 16-pound folio. We also obtained, by reducing the size of the letterhead for interdepartment correspondence, a substantial saving in costs."

In this bank the new form of letterhead was cut down by one third, thus producing an 8½ by 7½ size which is folded once to fit an envelop 3⅞ by 8⅞ inches. Out of a ream of high grade paper (500 sheets), it was possible before to get only 2,000 sheets of the 8½ by 11 size, but with the smaller size the ream will cut into 3,000 pieces, an increase in number of 50%. The resultant saving is very attractive. A 16-pound folio at 20 cents per pound would cost \$3.20 for a ream of 500 sheets. When the 8½ by 11 letterheads are cut out of this, you get 2,000 letterheads costing \$1.60 a thousand. With the reduced size it is possible to cut 3,000 out of a ream at the same price a pound, thus bringing the cost of the smaller letterhead down to \$1.07 a thousand.

Economies like this mean the saving of a substantial sum annually, but it is necessary, of course, for the buyer to know paper stock values and the advantageous ways to use it. By collecting catalogs of paper supply houses, visiting printing establishments, and talking with salesmen, the buyer in this southern bank was able to get satisfactory results at a reduced cost and what he did can be done by almost any man who studies the market in a similar way.

**First and Old Detroit National Bank**  
**REQUISITION ON SUPPLY AND PURCHASING DEPARTMENT**

Date \_\_\_\_\_ 191\_\_

Please furnish the \_\_\_\_\_ Department with the following supplies:  
**REQUISITIONS ON THIS DEPT. WILL RECEIVE ATTENTION DAILY BETWEEN  
 THE HOURS OF 7:30 and 9:30 a. m.**

Quantity Wanted	DESCRIPTION OR FORM NUMBER

**Wayne County and Home Savings Bank**  
**DETROIT**

**Requisition for Stationery or Supplies**

Date \_\_\_\_\_ 191\_\_ Book No. \_\_\_\_\_

Where form number is not shown, describe fully in sundries column. Requisitions for ordinary supplies must be filed three days in advance, Preserve Carbon Copies; items described thereon are charged to you.

QUANTITY	Form Number	SUNDRIES

**The First National Bank of Chicago**

No. 625 Date \_\_\_\_\_

To \_\_\_\_\_ Department  
**First National Bank Building;**

Please furnish to \_\_\_\_\_ Department  
 work and supplies as follows:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Signed \_\_\_\_\_

Time and Supplies Furnished on Above

\_\_\_\_\_ Hours \_\_\_\_\_ Minutes

Supplies \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Received the above

Signed \_\_\_\_\_

\_\_\_\_\_ Dept.

No work done without an order.

Figures 47 and 48: The requisition form (bottom) issued in triplicate keeps definite tab on all buying in a western bank. No work is done without an order. The two other similar forms above are proving satisfactory in other banks in keeping track of supplies systematically.

Department \_\_\_\_\_

Made by \_\_\_\_\_

\_\_\_\_\_ Zinc \_\_\_\_\_ Electrotypes \_\_\_\_\_

Filed in Drawer No. \_\_\_\_\_

**Figure 49: A bank which believes in carefully keeping its substantial investment of halftones and cuts uses this record card for them.**

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## SUPPLY ORDER

The Bank named below has today opened an account with us: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

☐ Transit Department. Prepare endorsement stamp

No. \_\_\_\_\_ Cashier

☐ Supply Department. Send addressing stamp.

☐ Blank drafts as follows: \_\_\_\_\_

☐ Printed drafts as follows: \_\_\_\_\_

☐ Printing Department. Prepare addressed envelope. Attach proof to duplicate order and submit to head of Mailing Department.

☐ Addressing Department. Prepare plate.

☐ Foreign Department. If it is considered profitable to send this bank supplies, ascertain what facilities are desired. Send \_\_\_\_\_

☐ Filing Department. Provide place in regular account file.

Each department will retain one copy and acknowledge receipt on original in space provided therefor.

Complete \_\_\_\_\_

Manager, New Business Department.

**Figure 50: This form shows how a bank opening a new account in a reserve city bank is provided with supplies. It is illustrative of the thoroughness with which each department prepares the supplies.**

When a new account is opened, the bank has to furnish the depositor with such supplies as a check book, a pass book, and so on. But these are perhaps the minor share of the supplies provided for the new customer. The form shown in Figure 50 illustrates how one bank flashes the word to every department in order that its new bank customer may be quickly provided with supplies, and that there also may be a complete record of the transaction, as, for example, the order on the addressograph department. The instructions "prepare plate" on the form shows how the bank arranges to get the depositor on the list at once so he will receive the bank's direct advertising literature without delay.

The ordinary depositor seldom realizes just how much free service a bank gives. The popular idea that the extent of supplies furnished in connection with an account consists of a check and a pass book is due to lack of knowledge concerning a bank's full function. Thus, the control of supplies becomes a matter of prime importance since every depositor from the time he signs on the "new account" or "signature" card is receiving expensive supplies.

THIS BANK PERFECTED ITS ROUTINE BY DEVELOPING  
ITS JUNIOR CLERKS

Active solicitation for new accounts has, of course, increased the amount spent for supplies in the general run of banks. It has also increased the advertising costs. In banks that advertise, the use of halftones and electros also has become extensive. It is essential to keep a line on all the cuts, not only because they run into money quickly, but also because they should be instantly available at all times. As soon as an eastern bank buys a cut of any sort a proof is taken and pasted on the back of a white 5- by 8-inch card. One of these cards is reproduced in Figure 49.

These cards are arranged in a file both according to departments and alphabetically. Suppose a cut of the vice-president in charge of real estate loans is wanted. It is a simple matter to go to the file devoted to the real estate department, pick out the card, look at the proof of the cut and find exactly where it is.

"By using this system for handling our supply of electros and halftones," said the president of this bank, "we have practically eliminated loss. Before we put it into effect it was not uncommon to lose half a dozen cuts every month. Sometimes these cuts were part of a series and the loss was therefore more serious than ordinary. Again, we formerly scattered the cuts around and could not find them when we wanted them. This inexpensive little system, however, has eliminated all the bother and stopped the leaks."

Naturally, many of the plans specifically described in this chapter are too comprehensive, doubtless, for economical use in a small bank. But the general principles underlying them *can* in a proper degree be applied in the small bank, and that's why it's worth while studying these methods preferred by the big banks enjoying volume enough to justify very detailed cost-reducing experiments.

To sum up, handling purchasing wisely requires just as effective management methods as do other bank activities. The purchases often may be small as units, but in the aggregate they loom big enough on every bank's cost sheet.

## CHAPTER XIII

### SIMPLIFYING THE TELLER'S WORK

**A**FTER abolishing a scratcher system for recording items handled by the receiving teller and supplanting it with the "batch" system, the services of an assistant teller were eliminated and an annual saving of \$1,200 made by a suburban bank in the Middle West.

The problem of simplifying the work of the tellers in handling items is as important, in many respects, as facilitating the work in the transit department, which was taken up in a previous chapter.

Since the tellers represent a large item in the labor expense—which is usually more than 50% of the operating expense, as shown in the tables on pages 90 to 93—it is important that methods suggesting ways to cut these costs, should be adopted. A complete description of these will be found on the pages which follow. The expense caused by the tellers is sometimes as heavy as that caused by the bookkeepers, who also result in a big item in the labor expense. Plans that have helped to facilitate the bookkeeper's tasks and cut costs are described in the next chapter.

Before the "batch" system was employed in the bank just referred to, long lines sometimes formed before the tellers' windows, congesting the work and impairing the service given to customers. Now all checks are turned over to the transfer department, where they are run off quickly on the adding machines.

Here is how the system works. Suppose that teller number 2 receives five checks and \$150 in cash

from one individual. It is the tenth deposit of the day. The teller verifies the cash and compares the total of the checks with the total on the deposit slip (Figure 51), then places the checks with the slip in a small receptacle on top of other checks similarly received during the day.

The checks thus accumulated are collected by a clerk from the transfer department. We will say this is the first batch of checks and deposit slips received during the day, so it represents "Lot 1." A special stamp bearing the teller's number, the date, and the number of the lot is used by the transfer department (Figure 52). The clerk receiving the lot stamps the backs of the checks and the deposit slips accordingly. the same stamp is used for the sheets upon which the items are run off on the adding machines. Each sheet is stamped at the top of the list.

The transfer clerk lists the items in the following order from left to right: "clearings," "us checks," and "out-of-town items." The cash, of course, is run off from the deposit tickets. Then all credits, charges, and recapitulations are made. This is done with pen and ink, an ordinary ledger sheet being used. The left half of this sheet is used for memoranda, the work being done with a pencil, and then the final recapitulation is taken off onto the other half of the sheet with pen and ink.

If an error is found a correction is written on a special slip (Figure 53). These forms are in bound books in triplicate. One goes to the depositor, one is used in charging or crediting the account, and one remains in the book as a memorandum.

At the end of the day the transfer department is able to tell the receiving teller what his cash should be. If a shortage is detected in proving the cash, the receiving teller is obliged to check over his deposit tickets to find it. By stamping the tickets with the

Chicago \_\_\_\_\_ 191 \_\_\_\_\_

CHECKS ON OTHER CHICAGO BANKS AND MONEY ORDERS	EXCHANGE	CHECKS ON { THIS BANK OTHER TOWNS AND CITIES
		TOTAL OF OTHER COLUMN
		CURRENCY
		GOLD
		SILVER
		COUPONS
		TOTAL
		EX.

**Figure 51:** This deposit slip, which probably is typical of the form used in the majority of progressive banks, is valuable since it enables the receiving teller to make a quick comparison of the total amount of the checks with the figure given on the slip.



		CREDIT	DEBIT
The following correction was made in your \$ _____ deposit of _____			
<b>MEMO. For</b> _____		We <b>CREDIT</b>	We <b>DEBIT</b>
<b>Address</b> _____		Your Account	Your Account
The following correction was made in your \$ _____ deposit of _____			
Error footing _____ Should be _____			
Error listing check _____ Should be _____			
Being check of _____			
On _____			
PLEASE ADJUST YOUR RECORDS ACCORDINGLY. RETAIN THIS ADVISE. If same is a CREDIT memo. present to bank for entry in pass book.			
<b>SHERIDAN TRUST AND SAVINGS BANK. Chicago</b>			
Date _____			
Clerk _____		Cashier _____	
<b>MEMO. For</b> _____		We <b>CREDIT</b>	We <b>DEBIT</b>
<b>Address</b> _____		Your Account	Your Account
The following correction was made in your \$ _____ deposit of _____			
Error footing _____ Should be _____			
Error listing check _____ Should be _____			
Being check of _____			
On _____			
PLR RETA present		RDINGLY EDIT memo.	
<b>INGS BANK. Chicago</b>			
Date _____			
Clerk _____		Cashier _____	
<b>ME</b>		<b>IT</b>	
<b>Add</b>		<b>ount</b>	
<b>The f</b>			
<b>Err</b>			
<b>Err</b>			
<b>Bei</b>			
<b>On</b>			
<b>R</b>			
<b>p</b>			
<b>D</b>			

*J. H. Morris*  

10

SEP 28 1917

1

TELLER	DATE				
A M CASH					
CASH REC'D.					
REC'D. FROM TELLER NO.					
"  "  "					
"  "  "					
"  "  "					
"  "  "					
CASH PAID OUT					
CHANGED TELLER NO.					
P M CASH					
ACTUAL CASH					
OVER SHORT					

Figures 52 and 53: By giving each teller a number and a summary stamp (smaller forms), the transfer department of an eastern bank finds it easier to distribute checks and locate any errors. Corrections are entered on the "memo" slips and customers promptly notified.

number of the teller, the transfer clerk is able to keep each teller's lot grouped so that if a check-up is necessary the right tickets can easily be found.

When the receiving teller indicates the amount of the deposit in the regular space on the deposit ticket a similar memorandum is made on the sheet used in running off the items in the transfer department. This is done with a pencil. The amount thus recorded is carried to the credit side of the recapitulation sheet.

A memorandum of any exchange paid is kept by the teller on a special form called a "Credit Exchange Ticket" (Figure 54). The name of the depositor and the amount is indicated on the form. One card is used until it is filled. It serves as a record for the teller and can be checked against the figures which are run off in the transfer department.

This "batch" system is simple in operation, speedy, and accurate. The receiving teller need not worry about a scratcher. His work is largely mechanical with the exception of verifying the currency.

HERE ARE "STOP-PAYMENT" PLANS THAT HAVE BEEN  
SUCCESSFUL IN MANY BANKS

In another bank, which has more than \$6,000,000 in deposits, "proof tellers," developed from junior clerks, enter all checks received over the counter by the three receiving tellers. This "proving" has practically done away with two assistant receiving tellers, who were indispensable under the old "blotter" system. The new system has resulted in greater speed and accuracy and thus reduced the cost of handling items. Chances for error are greatly lessened and practically no overtime work is necessary.

The receiving teller simply pins together in a bundle all the checks of each depositor and marks the total. He enters his cash and indicates the amount on a blue ticket, which goes with the checks and the deposit

[illegible]

**Figure 54: By noting on this form immediately any exchange paid by a customer, the teller of one bank keeps his record clear.**

<b>GREENEBAUM SONS BANK AND TRUST COMPANY</b> <b>CHICAGO</b> Deposited for Account of _____								
<b>Checks on other Chicago Banks</b> Dollars Cents			<b>Checks on This Bank</b> Dollars Cents			<b>Checks and Drafts on Other Towns and Cities</b> Dollars Cents		
			<b>TOTAL CHICAGO</b>					
			" ON THIS BANK					
			" " OUTSIDE					
			<b>CURRENCY</b>					
			<b>SILVER</b>					
			<b>GOLD</b>					
			<b>GRAND TOTAL</b>					
			<b>LESS EXCHANGE</b>					

**Figure 55: Like Figure 51, this form of deposit slip simplifies the work of sorting the deposit items and saves much time in checking amounts later. It also shows customers how to classify items.**

tickets to the proof tellers. The deposit slips are credited to the proper bookkeeper. Time is saved in getting the items to the proof tellers by having a basket fitted into the rear of the receiving teller's cage, near the proof tellers' desks.

When the checks and deposit tickets have accumulated sufficiently to permit a run, they are taken out by a clerk who sorts the checks into several divisions or departments. Each division is then listed on an adding machine. This eliminates double handling of the items in the cage. It permits the teller to handle three times as much work as formerly, as the actual progress of a deposit of 10 checks here described will clearly indicate:

Two of these checks are drawn on the local home bank, which is assumed not to be in New York; four are New York checks; and four are on other local banks. With these 10 checks is a deposit of \$200 in currency. The deposit slip is made out (Figure 55). The cash is listed on a blue "cash ticket" (Figure 56), while the checks are pinned together and the total amount of the deposit indicated on a separate ticket. The deposit tickets are stamped by the proof tellers with the number of the corresponding receiving teller. There are three receiving tellers in this bank. At the end of the day each teller balances with the proof tellers (Figure 57). The proof tellers make up the recapitulation on special forms (Insert VI.) Three of these are made up by the three proof tellers. These entries are combined for the general book. The sheets remain in the proof tellers' department.

If a difference in figures appears while making the runs, the work is checked back immediately and the error discovered. It may consist of an error in listing on the deposit ticket, an error in the addition of deposit tickets, or an error in listing on the adding machine. The small number of items constituting a

Date _____	
<b>CASH TICKET</b>	
Depositor _____	
Currency _____	
Gold _____	
Silver _____	
TOTAL _____	

Figure 56: When a customer makes a deposit, this ticket helps the teller to classify the cash portion of the total for late checking.

TELLER'S REPORT _____ 191____	
Cash on hand previous day _____	
Generals _____	
Clearings A. M. _____	
Individuals _____	
Loan Balances _____	
Investment Deposits _____	
Trust and Real Estate Loan Department _____	
Drafts, Cashier Checks, and so on _____	
Trades _____	
Savings _____	
Exchange _____	
Clearings and Transit Items _____	
Cash on hand today _____	
_____	
_____	
_____	
_____	

Figure 57: This sheet shows exactly the condition of business in the teller's cage each day and serves as a quick check on it. From this information any officer can gain an idea of the daily business trend.

run permits immediate checking in case of error and takes but a minute or so.

Methods of this type usually can be effectively applied in any bank which has upward of \$2,000,000 deposits. The scratcher, however, is an important part of the machinery of the small bank, where the teller ordinarily has enough time to care for it properly. In many banks business has increased to such an extent that an assistant to the receiving teller has been employed to enter the items and to relieve the teller at the window. As a rule, where two men occupy a cage they alternate, under this system, between receiving deposits and entering items.

A bank with 14 employees in a middle western city found it necessary, owing to heavy gains by the commercial department, to give its one receiving teller more assistance. Instead of eliminating the scratcher and adopting the "batch" system, however, the bank moved up a junior clerk to the position of assistant teller and then it arranged to transact the increased business in a simple and yet direct way.

Formerly it was the custom of the receiving teller to lay aside the checks and deposit slips until a lull in the day's business provided an opportunity to enter the items. He still lays them aside, but when they bulk fairly large either the teller or his assistant enters them in the scratcher and runs off the items on an adding machine which is kept in the cage. This prevents holding up the line at the window and permits all the work to go ahead without interruption.

The scratcher consists of a looseleaf transfer binder (Figure 59). On one side of the sheet the teller enters in the order given the general items and exchange, the deposits and the cash. On the other side are the clearings, "us" checks, and general items in order. At the end of the day the receiving teller must balance with the bookkeeper.

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The scratcher or blotter is still a part of the system of a majority of banks, investigation indicated. This is regardless of whether banks use the old pen-and-ink bookkeeping method or machine. In many banks a looseleaf binder is used and each sheet headed up.

Each of these banks handles a large volume of business in small accounts. But where a bank's commercial business consists of a comparatively small number of big accounts, there obviously is little necessity for having the sheets headed up. One trust company uses bound books of plain ledger sheets, which are headed up with a pen. This bank also uses a handwritten ledger, but at the time of the investigation involved in the preparation of this volume was planning to change to machines.

**SPECIAL EQUIPMENT FOR HANDLING COIN AND CURRENCY OFTEN  
NOT ONLY SAVES TIME BUT REDUCES EXPENSE**

[Except in banks using the "unit" system, which was described in the volume on advertising and service, the methods of the paying tellers, the keeping of their records, and so on, generally are about the same. But with "stop-payment" orders it is interesting to note the methods which have been effectively employed in some banks—methods which can be easily adapted to the usual run of banks. A middle western bank, for example, having deposits of \$7,000,000, has practically eliminated the possibility of oversight or error on "stop payments," reduced the cost of stationery, and simplified the whole task of handling these items.

When a notice comes in by telephone to stop payment on a check, the data is placed on a special form (Figure 61) by the paying teller. When a customer comes to the bank and requests payment stopped he is handed one of the forms to fill out. The data on the form includes the date of notification, number of the







check, the date, to whom issued, the amount, reason for stopping payment, and name of the depositor signed to an agreement not to hold the bank liable for any loss sustained.

This data is transferred to another form (Figure 60) the size of an ordinary check and of a different color than the first one. This goes to a bookkeeper. He checks over the stop-payment slips with clearing house items. The slips are held six months. This is indicated on the form, which also shows the date issued, number, amount, whom drawn by, in favor of, whom, what order received in and entered, and bookkeeper and payer concerned.

Before going to the bookkeeper, this form is turned over to a stenographer, who copies the following data on a sheet of heavy paper perforated into strips:

Date; drawn by; payable to; number of check; amount of check.

This data for each order is entered on the strips of paper, which are about an eighth of an inch wide. These are placed in transparent tubes on a panel holding 100, the panel being hung at the paying teller's left hand. The orders are chronologically arranged by days of the month, which is easily done by shifting the tubes up and down. This particular bank anticipates about 140 stop-payment notifications each month.

This system is a great improvement over the old system, which was to write all the data on a single sheet of paper. Many times the data was blurred and run together so that there was considerable danger of a check being overlooked in the rush of bank work. Now it is almost impossible to overlook one. To reduce still further the chance of an oversight the more "dangerous" checks are enclosed in red tubes. A label is placed at the top of the frame showing each month represented as in Figure 62.

Thursday, Oct. 11, 1917					
General	Deposits		Cash	check	
19.00	16.25		14.00		
32.00	1850.00		40.63		
	20.00		425.30		
	89.30		50.00		
	334.30		98.30		
	182.00		20.45		
	35.00		192.78		
	75.00		5.00		
	1280.04		25.00		
	1925.00		16.80		
	154.00		90.16		
	32.00				
	50.000				
	982.00				
	40.34				
Exchange	72.90				
344.60	1750.00				
	6342				

Figure 59: A scratcher like this kept in a looseleaf binder helps the teller of one bank to keep the day's business correct. As a quick method of tabbing figures offhand under various headings as needed for later checking, it is of value to many banks.

Another effective form to indicate "stop payments" was devised by a small western bank. White sheets, to distinguish them from the yellow sheets used for the posting ledger and statements (Figure 63), and the same size, are inserted just in front of the account on which the stoppage of payment is recorded. The sheet, you will note, bears the words "STOP PAYMENT" in bold type at the top so that it will attract immediate attention, and below is indicated the amount, to whom payable, the number of the check, and the date. The paying teller also makes another memorandum of the item, and pastes it on a strip of cardboard which hangs at his left. Of course, there is a comparatively small number of these items in this small bank, and the paying teller is able to memorize most of them.

Now let us take up the handling of coin and currency—among the teller's most trying tasks and often one of the most difficult. Often it can be made far easier and the tested methods that follow are in actual use by progressive banks.

ONE BANKER HAS FOUND THIS SIMPLE SYSTEM OF HANDLING  
DAILY DEPOSIT TICKETS EFFECTIVE

By installing a specially constructed steel cabinet for holding the coin and currency, a bank in the East, which has deposits of about \$7,000,000, saved at least 20 minutes a day for the paying teller. The teller now is able to get his day's cash ready in four minutes where formerly this work required 15 minutes. He can get his cash together and into the vault in less than 5 minutes where formerly it consumed from 10 to 30 minutes. The other tellers are required to sort their coin and currency to conform to the payer's system, so that the time-saving process actually has extended through all the money-handling departments of this bank.

Investigation indicated clearly that in banks where the money is piled into tin boxes at the end of the day, after being counted, or is piled in the vault without systematic sorting, two and three times as much time is required to get it ready for the day's work.

In one bank the paying teller never can get his cash ready for business in less than 15 minutes, but he has many early customers who want cash quickly. His work is often interrupted and it is sometimes long after the doors open before the cash actually is ready. Time is lost piling the currency on a narrow truck and traversing the distance to the vault, which is across the counting room and through two doors.

But in the bank first mentioned—the one using an effective steel cabinet—the vault door is but 12 feet from the door to the payer's cage, and it is, of course, easier to get the currency and specie ready.

In the top of the cabinet and to the front are five oblong compartments. These hold \$81 in pennies, \$240 in nickels, \$900 in dimes, \$1,050 in quarters, and \$1,250 in halves. To the rear of these compartments are three others. One of these is used for gold, one for smaller cash in amounts from \$1 in pennies up, and one for miscellaneous articles used by the paying teller.

Just below in the cabinet are four large square compartments. In three of these are kept currency, tied in packages and marked with the amounts. These packages are always kept in the same place, thus facilitating the work of distributing them to their proper places in the morning.

On top of one of these piles of currency—the left upper to be exact—is kept a wooden tray of coin which is filled and ready for each day's use.

The currency is assorted and arranged in packages by the assistant paying teller. When it is arranged—the work requiring but a few minutes—the cabinet is locked and wheeled into the vault.

<b>STOP PAYMENT.</b>			
Hold until	3-21	1918	CHECK
		Dated 9-21-17 No. 9678 Amount \$ 25.22	
DRAWN BY <u>M.R. Christie</u>			
IN FAVOR OF <u>Robert E. Scott</u>			
Order Received and Entered 9-16 1917		Order Received and Entered 9/26 1917	
<u>C</u> Bookkeeper		<u>S</u> Payer	

Figure 60: This is the form used by one bank to advise the bookkeeping department of stop-payment orders on checks in transit.

CHICAGO, Sept. 21 1917

**To the Greenebaum Sons Bank & Trust Co.**  
**CHICAGO, ILLINOIS**

Please STOP PAYMENT of Check

No. 9678 Dated Sept. 21 1917  
 issued to W. Hayes  
 for \$ 25- for the following reason:  
Lost

---

hereby agreeing to hold you harmless for said amount, and all expenses and costs incurred by you on account of your refusing payment of said check and agreeing further not to hold you liable on account of payment contrary to this request if same occur through inadvertence or accident only.

Respectfully,

Tom Gordon  
 Depositor

Figure 61: An unusually complete form of "stop-payment" notice which the customer signs for the bank's guidance and protection. It is effective and simple and has proved worth while in one bank.

# STOP PAYMENT

APRIL

DATE	PAYABLE TO	NO.	AMT.
1 4/2	Henry Gordon	308	12 30
2 4/4	J. H. P. Ford	136	900 02
3 4/4	George Haynes	458	60 20
4 4/7	Chas. A. Johnson	634	5 39
5 4/10	Kimball & Company	39	75 00
6 4/11	E. C. Edwards	97	125 00
7 4/12	Chapman & Co	68	44 61
8 4/18	Monarch Co.	182	603 30
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
49			
50			

Figure 62: This is one bank's method of keeping "stop-payment" items constantly before the paying teller. The holder for the list of "stops" is hung in front of the teller. The names are listed easily and may be changed quickly, as the slips slide in and out.

In the morning the currency is placed in 12 compartments in a drawer at the counter used by the paying teller. By keeping each package in the same place each day the teller's work is greatly facilitated.

For example, one vertical row of compartments contains nothing but \$5 bills. In the lower compartment there may be \$200 in \$5 bills, \$150 in the one above and so on. All the \$5 bills are kept in one package, say 100 in one package, but each package is divided into smaller packages containing varied amounts. Each smaller package is wrapped and labeled with its proper amount. A summary is made of the amounts contained in the separate packages of each compartment, and this total amount is placed on top. The teller then can see at a glance how much money he has.

There are three large compartments for reserve cash in the vault. These are separated into smaller compartments which contain certain denominations. In still another compartment are kept bags of silver. The paying teller makes up a regular cash sheet as shown in Insert VII.

Every receiving teller must have his cash up at 4 o'clock. This is checked by the assistant paying teller. It is placed on special shelves which are taken out of the vault during the checking process, and it also is put into separate compartments.

Formerly, when the paying teller of a western national bank kept his currency and coin in tin boxes and trays, several trips were required to take the money to and from the cage to the vault. Now this work is eliminated, and the teller can get his cash ready in the morning in less than five minutes.

The money is kept in a cabinet containing 14 drawers and two large compartments. It holds: five drawers for nickels, each containing \$100; four drawers for pennies, each containing \$100; one for



George J. Warren

**Figure 63: Linking up the "stop-payment" order to the account**  
like this is an effective way, one bank has found, to prevent any possible mistake in payment. The notice is inserted by the bookkeeper in front of the customer's account where it will be seen.

## INSERT VII



dimes, containing \$300; one for quarters, containing \$400; one for half dollars, containing \$400; one for dollars, containing \$600; and one "gold tray" to contain \$1,200.

The two large compartments contain the currency.

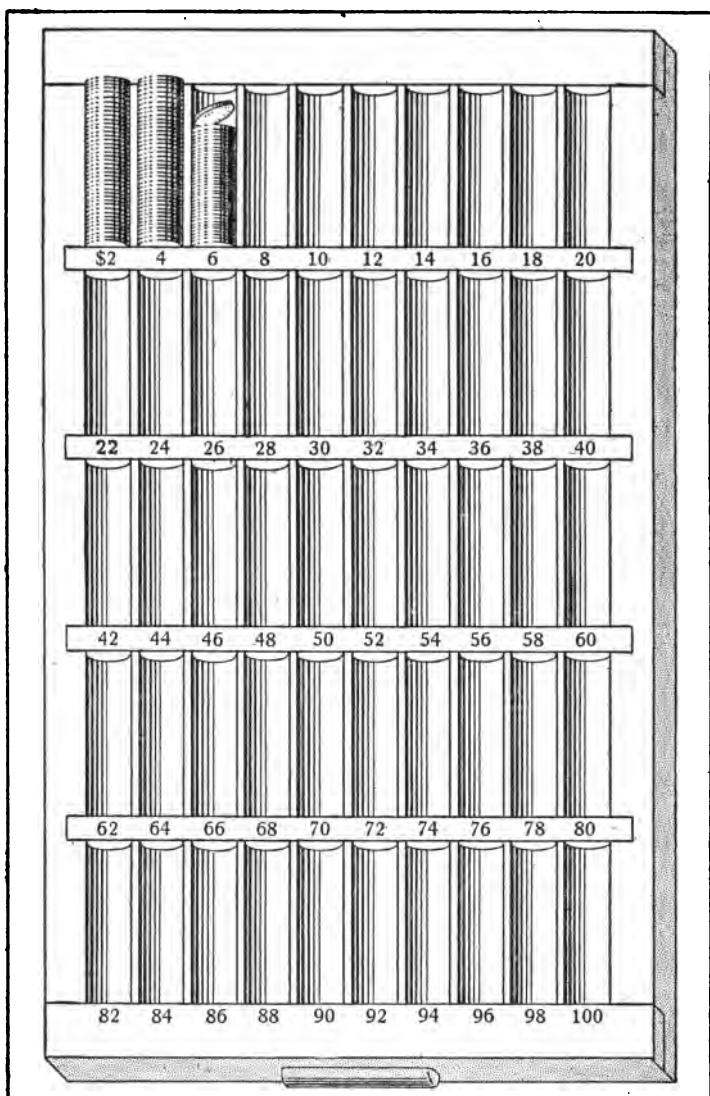
A coin changer also forms a part of the paying teller's equipment. At the end of the day all money is dumped into the proper drawers. Each wooden tray fits into a tin drawer. Each tray has a certain number of grooves into which the coin fits (Figure 65). These are divided into sections. Each section is numbered and the teller can see at a glance how much money is on hand.

In addition to the cabinet the teller has several pasteboard boxes which are labeled according to the money they contain. Each box holds a certain amount. In these are kept surplus silver. They are substitutes for the bags ordinarily used for the purpose. Thus the paying teller can get any amount needed without stopping to count out the money.

A payer's reserve cash book facilitates the work of one paying teller. It also is kept in the vault and shows the amount taken from the reserve and added to it. These figures are transferred from the teller's proof sheet. The date is stamped on one side when a change is made.

This book forms a permanent record of the reserve cash. The number of the vault in which the cash is kept is also indicated in the book. It is kept in balance at all times. The teller also carries the aggregate reserve on his records at all times.

In one national bank misunderstandings and mistakes made in deducting cash payments from commercial deposits, which formerly occurred frequently, were eliminated by a receipt form which the customer was obliged to sign. This is called a "less-item" ticket (Figure 66) and is printed on yellow paper to



**Figure 65: How one bank keeps its cash in order and thus reduces labor cost. These cabinets are constructed to hold different sizes of coins and the compartment numbers enable the teller, at the close of the day, to tell instantly what cash he has on hand.**

make it easily distinguishable from the deposit tickets, which are white. When a customer makes a deposit by check and desires to have a certain amount deducted, he must sign his name on a "less item." This ticket is pinned to the deposit slip and is filed with it in an envelop bearing the customer's name. The envelops are filed alphabetically. Here is an example:

John Gard presents a New York draft for \$50 and wishes to have \$30 credited to his account. The teller fills in the "less-item" ticket with the amount to be deducted and presents the slip for the customer's signature of approval.

When Gard gets his monthly statement he may have forgotten the deduction of \$20 and perhaps will protest to the cashier. The "less-item" ticket bearing his signature is promptly brought from the files and the matter is settled without further controversy.

HERE IS A STRIKING INSTANCE OF HOW POSTING  
MACHINES MAY REDUCE COSTS

Keeping the daily deposit tickets in order also is a task that sometimes causes much annoyance. If these tickets are not carefully filed, costly omissions and other errors are likely to happen. In many banks it is customary to gather up the tickets at the end of the day's business, tie a string around them and place the package in the vault, together with other packages of precisely the same appearance. If it is necessary to refer to any particular ticket, perhaps all of the packages must be handled, and the consequent loss of time and confusion requires a drastic remedy.

A national bank in the Middle West has solved this problem of handling deposit tickets in a way that can be used in many banks with but slight change. A folder consisting of two separate pieces of tough manila paper about the size of the ticket is used. One of these pieces bears a record like that shown in

Deposited with <b>First National Bank of Englewood</b> For Account of			
Name <u>John Gard</u>			
Address _____			
Chicago <u>SEP 14 1917</u> 191____			
Please List Each Check Separately			
CURRENCY _____ GOLD _____ SILVER AND CHANGE _____	DOLLARS	CENTS	
Checks <small>(on this bank, name of maker; on other Chicago banks, name of bank; out-of-town banks, name of town or city)</small>			
56	50 - 20 30		
See that all Checks and Drafts are Indorsed			

<b>Less Item Ticket</b> _____	
Chicago <u>SEP 14 1917</u>	
Received \$ <u>20</u>	Cash
which the undersigned authorizes the	
<b>First National Bank of Englewood</b>	
to deduct from deposit of this date	
Sign <u>John Gard</u>	
Commercial _____	
Savings No. _____	

Figure 66: These two forms illustrate how one bank lessens errors when a cash payment is deducted from checks for deposit and handed over to the customer. The deduction not only shows on the deposit slip but is acknowledged by the customer on the "less-item" ticket.

National Bank of the Republic CHICAGO	
<b><u>DEPOSIT</u></b> <b><u>TICKETS</u></b>	
<div style="border: 1px solid black; height: 40px; width: 100%;"></div>	
A—CHICAGO	
CHI—F	
G—KL	
KN—N	
O—SI	
SK—Z	

Figure 67: Here is an orderly way of taking care of deposit tickets. These binders of stiff paper are inexpensive and they offer a simple method of indexing, making all the tickets readily accessible for reference. The slips are held in place between the covers by cord.



Figure 67, so that the contents of the package can be readily determined. The back piece has a simple clamp-string attachment and the tickets can be quickly tied up. When the tellers finish with the day's deposit tickets it is easy to put them in one of these binders and send them to the vaults, where they are filed by days.

In the aggregate, then, investigation indicates that the work of the tellers is made easier, and results—cost of doing business reductions—are far better when their work is planned into a careful routine, which fundamentally appears to be not unlike the plan of “straight line” factory machine operation.

## CHAPTER XIV

### HOW MACHINERY CUTS THE LABOR COST

**T**HE installation of 13 machines at a cost of \$2,500 cut labor costs in one bank which has capital, surplus, and undivided profits of \$275,000, and deposits of \$1,600,000, approximately 30% within five years. The machinery included two posting machines, three adding machines, one addressing machine, two coin changers, a mailing machine, and two typewriters.

As in many other banks, the machinery used in this bank serves to cut down the cost of bookkeeping, which almost always is a heavy item of expense. The posting machines took the place of the old-fashioned laborious ledgers.

Two bookkeepers who each receive \$90 a month were replaced with two girl operators at \$65 a month each—a saving of \$600 a year. The adding machines disposed of the tedious task of mental calculation of long columns of figures—and lessened the chance of error. The coin changers helped the tellers to keep coin in handier shape and also to detect mutilated coins. The addressing machine and the mailing machine provided for more satisfactory dispatch of outside business in all departments. Operations were quickened all round and the same number of clerks was able to handle a much larger volume of work.

Nor are these the only advantages that normally follow the installation of machinery in the counting room, investigation indicated. The classification and tabulation of costs is simplified from month to month

when machines are used, and it is easier to classify expenses so they can be compared at a glance.

The tabulation shown in Figure 68 illustrates how one banker keeps his operating costs minutely classified over a year on a single sheet. He now finds it much easier to control costs and to check them. The form used by this bank can be adapted to the use of almost any bank employing machines.

When the bookkeeping is done by machinery the work generally is neater, more accurate, and more legible, and greater speed in handling the accounts and superior service to customers naturally follows.

A few examples of how machinery works into bank routine will illustrate the effectiveness of mechanical aids in reducing labor costs, especially in the bookkeeping department. In the bank just referred to, the one which uses the form shown in Figure 68, the bookkeeping machine operators run off the statements in the morning, alternating with the different alphabetical sections, so that a double check is kept on the work. The ledgers are posted in the afternoon. Handling approximately 2,600 accounts, in which there are about 1,250 changes a day, these operators are many times able to finish their work at 3:30 in the afternoon. On "heavy" days, however, they sometimes work until 5 o'clock.

As indicated on the statement and ledger forms shown in Figure 69, the old balance is brought forward with pen and ink, thereby eliminating a second run through the machines and helping to reduce the labor of the machine operators. The operators are not required to balance the statements against the ledger sheets. This work is done by two clerks, one of them calling back from the totals on the statements. The totals are taken off on an adding machine and are checked against the general ledger which is posted from the teller's scratcher.

The men who balance the ledger and statements also run off the clearings and assort the checks coming from the receiving teller. One of these is a young man who is receiving his first business training. By using him for this work the bank is able to avoid an investment in another machine and the addition of a higher-salaried operator.

Perhaps an even more striking instance of machine effectiveness is shown in a national bank in the South which has capital of \$600,000, surplus and undivided profits of \$1,250,000, and deposits of \$7,075,000. This bank has a battery of 24 machines. Four duplex transit machines are used in the transit department, and a special machine gets out the country bank statements. The tellers use 14 plain adding and listing machines. The methods used in the bookkeeping department were completely transformed by the installation of five ledger posting and statement machines at a cost of \$3,500. In installing these machines practically no time was lost. They were set up in the bank on a Saturday night and on Monday morning the pen-and-ink bookkeepers had become machine operators.

**HERE ARE THE DETAILS BEHIND A SUCCESSFUL BANK'S METHOD  
OF PROVING CHECK AND DEPOSIT BALANCES**

The posting machines had been installed nearly three years at the time the investigation involved in the preparation of this book was made. The same clerical force, that formerly was needed to post the ledgers alone, now posts ledgers and statements (Figure 70), thereby cutting the labor cost in half. With pen-and-ink methods it would be necessary to employ four extra men, and, if it were decided to post to the ledger alone, dispensing with statements, the services of only three men would be required on the present machine basis.

	January	February	March	April	May	June
<b>Adding Machines:</b>						
No. 1	\$ 7.50		\$ 47.68	\$ 1.71		
No. 2	1.00	\$ 1.00		1.00	\$ 1.00	\$ 5.75
<b>Addressing Machine</b>	3.40		20.12	5.28	8.18	
<b>Advertising:</b>						
Bank Statements	116.50	85.00		180.86		73.75
Sales Books	24.50					
General	35.50		2.00	.99	22.35	1.00
Newspaper	30.00	52.00		40.00		37.00
Signboards					5.00	47.50
Bank Building	3.50					24.40
<b>Carfare:</b>						
Railroad	14.60	9.90	11.55	11.55	9.90	18.50
Street Car	75.00	25.00	25.00	50.00	25.00	50.00
<b>Cashier's Checks</b>						
Currency Straps and Wrappers	32.00				32.00	
Cashier's Cks. Counter	11.50					
<b>Coin Counter</b>						
Carbon Paper				\$9.40		
Coin Bags					14.88	
Cust. Cks. N.B.N. Co..	8.00	12.00	12.00	14.00	7.00	3.00
Cust. Cks. Neg. Binders				32.67		
Cust. Cks. Pocket Cks.			377.44		119.75	
Cust. Cks. Eek. Checks.	2.25	4.75	1.25	7.25		17.82
Special	21.80		2.50			
Donations	5.00	3.00	15.00	9.00	5.00	100.00
Deposit Tickets				14.50		
Duty on Circulation	489.78					
Express	12.36	6.46	7.21	12.50	2.34	2.84
<b>Engines:</b>						
Gas	27.50	50.80	3.09	12.75		
Steam				20.70		19.31
Engineer	12.00	8.00		18.00	4.00	37.25
Expense - General	1.14	11.29	8.00	1.80	75.00	
<b>Folding Machine</b>						
Gas Globes and Mantels	1.20		1.50	.25	1.55	.30
Globes - Electric	35.28	76.45				
Heating	446.96	214.18				
<b>Insurance:</b>						
On C/D		57.00	1,013.35	785.29	57.75	24.55
Bank Building						
Employees		718.75				
City Deposits			250.00			
Registered Mail	1.34		7.01	4.49	4.74	4.87
Burglary						
Resistances				10.39		
Accident						
<b>Ink</b>	7.35					
<b>Ink Well</b>	1.18				.20	
<b>Light:</b>						
Gas	17.44	16.00	14.72	15.20		
Electric	12.16		6.08	6.08	20.28	6.08
<b>Power- Gas Engine</b>	78.72	90.56	77.76	89.76	72.80	47.84
<b>Matches</b>					.50	
<b>Metal Banks</b>				\$1.25	.90	
<b>Ext. Morning Work</b>	3.02	25.00	25.00	25.00		40.00
<b>Postage</b>	110.36	111.36	172.21	109.21	110.46	86.66
<b>Carried Forward</b>	\$1,642.54	\$1,576.50	\$2,098.27	\$1,540.87	\$600.55	\$626.42

Figure 68: The report shown on these two pages illustrates how one banker minutely classifies his costs over an entire year on a single sheet with the use of a machine. For purposes of reproduction, figures for only six months are given and the chart is divided. In reality,

	January	February	March	April	May	June
Brought Forward	\$1,642.54	\$1,976.50	\$2,086.27	\$1,540.87	\$900.55	\$636.42
Pencils						
Pens		2.00	4.00			
Pins					7.50	
Periodicals	10.00	14.00		20.00	3.13	5.35
Directors' Meeting						230.00
New Equipment		85.89			26.75	19.00
Pass Books		54.70			76.79	
Repairs	37.98	2.35	6.15	5.95	1.25	8.50
Rubber Bands		5.25			14.70	
Rubber Stamps	9.20	15.25	10.29	9.41	3.50	9.70
Rent:						
First Bg S.D. Co			6,000.00			
Ribbons	3.05					3.05
Reports Commercial	175.50	13.00	22.28	37.75	65.25	90.50
Salaries	2,489.34	2,454.99	2,467.99	2,389.99	2,009.53	3,342.99
Stationery - General	411.00	55.97	94.34	86.51	30.32	25.13
Letter Heads		64.93			70.00	
Public Rooms			11.60			
Time Service	3.00			3.00		
Supplies						
Cleaning	29.70		.80	41.80	12.60	
Sundry	2.40	19.28	6.92	15.65	9.19	45.73
Supper Money	43.90	16.00	19.80	14.00	8.00	23.40
Steward's Helper	38.00	42.00	50.00			48.00
Toilet Paper				15.68		
Towels						
Tags						
Taxes:						
Paving					5.79	
Corporation	5,232.22	837.38		1,374.55		
Real Estate						
Special						
Water	48.75		38.91	20.63	29.13	18.29
Telegrams	1.03	4.88	.50	2.15	3.88	11.80
Telephone	50.85	50.65	50.83	54.31	59.40	53.87
Toll Calls	.45	.85	.15			
Work on Savings	34.00					
Service Corporation				303.83	3.75	
	\$10,299.81	\$4,271.33	\$10,882.50	\$5,906.37	\$3,035.27	\$4,536.83

however, complete annual figures are included. Doubtless the idea can be widely adapted by other banks which desire to watch the cost trend closely for guidance in handling the business. Notice how the main items are listed alphabetically and carefully grouped for reference.

## 172 REDUCING YOUR OPERATING COSTS

This bank handles 5,500 active, individual checking accounts. Approximately 3,500 items are handled daily. It is estimated that 1,100 accounts change daily. This volume is at the lightest season of the year. At other seasons the volume increases, but at no time has it exceeded the capacity of the machines and the men handling them.

In addition to the ledger leaf, statement leaf, and blotter sheets, each bookkeeper has a separate blotter, using an ordinary day book in which is kept the amount of net deposits on his separate ledgers, and the amount of checks and deposits charged to his accounts each day. Each bookkeeper balances independently of all others and the head bookkeeper sees that the general blotter is in balance with the figures of the central teller. Each bookkeeper runs off lists of old and new balances of changed accounts, the machines automatically showing the difference, either plus or minus, which should agree with the difference between checks and deposits. Also, each ledger is proved at least once a month by a trial balance of all accounts. This is done by a different operator.

The bookkeepers handle nearly 1,000 accounts each, with a daily average of approximately 300 changes, involving some 500 to 750 items. An outline of the day's work will illustrate how the machines are used.

8 to 10:30 a. m.—Finish the posting of the statements; call the statement balances against the ledgers; prove the ledgers.

10:30 to 11 a. m.—Set sheets over; call dead accounts; file sheets, and so forth.

12:30 to 2:30 or 3 p. m.—First posting run on ledgers and sometimes the first run on statements.

3 to 4 p. m.—List all items from cages and prepare for first posting run.

4 to 5 p. m.—Finish the posting on the ledgers and begin the first posting of statements.

# BULLETIN

## BALANCE

BAL 1	29,076
	26
	161
	3
	5
	60
	68
	7
	4
	36
	32
	2
	1
	16
	13
	16
	3
CR	602
	29,218
BAL 2	29,218
	4
	48
	59
	78
	2
	25
	3
	45
	16
	53
	28,882
BAL 3	28,882
	50
CR	279
	29,111
BAL 4	29,111
	2
	29,109
BAL 5	29,109
	12
	35
	23
	50
	6
	28,870

CHECKS, DEPOSITS AND  
SIGN (-) AND  
INITIALS

## INSERT VIII

Figure 71: Hand  
ery works out effe  
adds and subtract  
the ledger sheets (





At 5 o'clock all employees usually are free. There is no long overtime work in this bank.

By substituting machines for ledgers, a national bank in an outlying district of a large middle western city reduced its expenses more than 50%. Where it formerly employed three bookkeepers and two statement clerks at a total of \$2,940 a year, it now employs two adding machine operators—two girls and one young man at a total of \$1,860 a year—a saving of \$1,080 in salaries alone. These three clerks are doing more work than previously was done by five, and doing it in less time and at less expense. This bank handles about 3,400 accounts by machines and there is an average of 2,000 changes daily.

For its statement this bank has a machine which both adds and subtracts, and for its ledger accounts a duplex machine capable of carrying four separate totals of figures at one time. Both machines are equipped with tally-rolls, which cost about \$34 a gross. About four rolls are used each day. The tally-roll is a carbonized strip of paper, about three inches wide, wound on a spool and made to fit at the back of the machine very much like the spools of narrow paper often used for listing purposes. It serves as a second ribbon. Thus two copies, instead of one, are obtained. The original printing is done on this tally-roll. The printing on the statement and ledger sheets is copied from the tally-roll by means of its carbonized under-surface. Since each new impression is made by fresh carbon, the copies are as distinct as the original.

Inserts VIII and IX show the statement and ledger sheets. They are of two colors, yellow and white, but of the same size,  $10\frac{1}{2}$  by 12 inches, and both have a space at the top for typing the customer's name, address, and the month and year. This is done with an addressing machine. On the statements there is no distinction between the columns; the checks,

<p>In Account With <b>HYDE PARK BANK</b> CHICAGO, ILL.</p>							
<p><u>PLEASE EXAMINE AT ONCE</u> _____ Vouchers Returned</p>							
<p>IF NO ERROR IS REPORTED IN 10 DAYS THE ACCOUNT WILL BE CONSIDERED CORRECT</p>							
PROOF	DATE	CHECKS IN DETAIL	DATE	DEPOSITS	DATE	BALANCE	
BALANCE BROUGHT FORWARD \$							

<p>HYDE PARK BANK, CHICAGO</p>							
<p>SHEET NO. _____</p>							
<p>PROOF    DATE    CHECKS IN DETAIL    DATE    DEPOSITS    DATE    NEW BALANCE</p>							
BALANCE BROUGHT FORWARD \$							

<p>Please examine statement and vouchers. This bank will not be responsible for any errors, discrepancies, irregularities, etc., unless reported within 10 days.</p>			
<p>In Account With <b>THE FORT WORTH NATIONAL BANK</b> Fort Worth, Texas</p>			
PROOF	CHECKS	DEPOSITS	BALANCE
BALANCE BROUGHT FORWARD \$			
BALANCE CARRIED FORWARD \$			

Having adopted the statement system, we respectfully suggest that our depositors designate date on which they desire statement rendered each month, filling out card provided at statement window.

USE PASS BOOK ONLY AS RECEIPT BOOK, AND SEE THAT ALL DEPOSITS ARE CORRECTLY ENTERED THEREIN.

Figure 69: The use of statement and ledger forms like these for taking care of depositors' accounts cuts the labor cost in a number of banks and eliminates each month the expensive necessity of running the figures through twice on the machines.

" oppo  
 indicates ce  
 O/D oppo  
 indicates an

DATE

1

2

2

## INSERT IX

Figure 72: Here  
 ning off depositors  
 However, this sec  
 umns, in contrast



deposits, and balances all being printed in one column and symbols or abbreviations used for distinguishing between them. On the ledger sheet, however, are separate columns for the dates, the key characters, the debits, and the credits.

To facilitate the proving of check and deposit postings and balances, the ledger sheets are divided into 13 sections, this division being governed somewhat by the activity of accounts. That is to say, if the accounts from A to B are as active as those from C to F, then section 2 will extend from C to F, while section 1 will include A to B only. Each section, of course, is numbered, and the sheets for the different sections are kept in separate holders.

Here is how a day's work is handled.

WHEN THE DAY'S WORK IS SUMMARIZED ACCORDING TO  
THIS PLAN, THERE IS SMALL CHANCE FOR ERROR

Let us suppose that a bunch of checks and deposits has been assorted alphabetically and is ready for posting. These have all been placed in one bunch, with the deposit tickets of depositor A beneath the checks of depositor A, the tickets of depositor B beneath depositor B's checks, and so on. The operator who handles the statements is the first one to receive these tickets and checks, so that no time is lost in getting the work through.

Having inserted the statement sheet of depositor A in her machine and set down his last balance, she proceeds to list his checks, which it will be seen are indicated by a minus (—) sign. The machine subtracts the checks from the balance as fast as they are set down. Next, reversing her machine so that it adds, she sets down his deposit, indicated by the abbreviation "cr." She then prints the result of her work and arrives quickly at depositor A's new balance, indicated by the letter A.

These operations cover all of the statement operator's work. When she inserts a statement sheet in the machine, placing it behind the tally-roll, she also releases a key, which causes the tally-roll to spring to one side, so that it does not revolve while the sheet is being turned into position. With the statement sheet in place, a pressure of the key brings the tally-roll into its correct position. Thus the tally-roll only moves when the figures are being printed upon it. These tally-rolls are about 56 feet long, and two will last one operator about a day. Before a roll runs out another is joined to it by pasting the ends together.

From the statement operator the checks and deposits pass to the ledger operator. They are accompanied by the detached strips of the tally-roll which show exactly the work done by the first operator. With the ledger sheet for depositor A inserted in the machine the ledger operator sets down the last balance, copying it from the ledger sheet, and entering it readily in the credit column.

It should be noted that when either operator copies down an old balance she prints it on the sheet. Thus she does away with the difficulty experienced in locating mistakes of copying when balances are, so to say, "thrown into the air." Next, she enters the customer's checks in the debit column and his deposits in the credit column, and under the checks the new balance, which she carefully copies from the tally-roll of the statement clerk.

This last step is the means by which the work of the statement operator is checked against that of the ledger operator. Both started out with the same balance for depositor A and both posted to his account the same checks and deposits. Therefore, if the ledger operator takes over the new balance arrived at by the statement operator, and adds it to A's checks, the sum ought to equal that of the old balance plus his deposit.

**Figure 70: The labor cost of posting depositors' items in one bank has been cut in half by using forms like this and machines. This saving is no doubt possible in other banks. The right-hand portion can be torn off and used in checking up customers' average balances.**



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But, if the ledger operator posts B's checks to A's account, the two sides of her work will not balance unless the statement operator has made identically the same error.

When the ledger operator tests the correctness of her work by inserting the balance arrived at by the statement operator, she virtually interlocks all the operations of the two in such a manner that the checks and deposits must be posted to the same accounts, and for the same accounts.

However, it is at the end of each section, and not after each account, that the work of the ledger operator is balanced. Having entered the new balance in A's account, as described, she does not attempt to find out whether that particular account balances but passes on to B's, following the same method of posting and bringing over the new balance.

As previously stated, her machine carries four totals. One of these is a check total, one a deposit total, the third a total of old balances, and the fourth of new balances. While a section is being run these totals are allowed to accumulate in the machine and are not used until the section end is reached. Then the operator takes four subtotals on the tally-roll; one of checks, one of deposits, one of old, and one of new balances. She then transfers on the machine the subtotal of checks and adds it to the subtotal of new balances; and the subtotal of deposits and adds that to the subtotal of old balances. If the two totals agree, her work is correct. If they don't the tally strip is passed to a clerk, who checks back the work and locates the error.

The next step is to list on the tally-roll the checks and deposits from the items themselves and to take totals of each. These are compared with the totals arrived at in balancing the checks and deposits of the section. In this way the operator eliminates any errors that

IF NO ERR

BALANCE

June 1

R

C

CR

I

INSERT X

Figure 73: Here  
machinery in supp  
a typical machine  
for checking resul



may arise from entering checks or deposits in the columns for carrying old and new balances, or vice versa. Such errors, of course, otherwise could be made and the section still balance, although the totals arrived at would be incorrect.

During the day the ledger operator runs through all the sections and if any of them are out of balance they are checked over by the clerk and the tally-roll is corrected with pencil. On the ledger sheets, however, all corrections are made on the machine. At the end of each run the corrections are proved by the same method used for proving the posting.

Three runs from A to K usually are made in one day, and two from K to Z. By the time the first run from A to K is finished a heavy letter from one of the larger banks in the city arrives by messenger, perhaps, and a third run from A to Z can be started. On heavy days, to speed up the work of the operators, book-marks of pasteboard strips are placed by the clerk in front of all accounts having entries, so the machine operator need not waste any time in locating them.

THE PLAN SO SIMPLIFIED THE ROUTINE THAT TWO BOOK-KEEPERS DO ALL THE WORK ON 2,000 ACCOUNTS

At the close of the day a recapitulation of the different "runs" is made for each section. This is made on the adding-subtracting machine. First, the total balance of the section for the day before is set down, then the check and deposit totals are listed. The new balance of the section then is taken (Insert X). The different totals are identified as belonging to a certain section by numbering the tally-roll for each section to correspond. Following this step, a recapitulation of checks, deposits, old balances, and new balances (Figure 74) is taken on the duplex machine. The total of deposits is added to the total of the previous day's balances, and the total of checks to that of the

-----DAILY RECAPITULATION COMMERCIAL LEDGERS-----						
Date Oct. 1, 1918						
Ledger No.	Deposits	Checks	Yesterday's Balance	Today's Balance	Ledger No.	
1	\$251.23	\$399.55				
	1,093.25	2,095.27				
	96.45	4,059.56				
	271.44	216.24				
	531.60	39.10				
	2,732.05	43.05				
2	3.29	65.00	\$88,240.56	\$86,302.10	1	
	87.50	325.43				

Figure 74: Here is an easy method of recapitulating the day's work. Total checks and deposits are entered by runs and the balance for the commercial ledgers for the day is gained from these figures.

Buddy. U O

1917											
DATE	DR CHECKS IN DETAIL	DR TOTAL CHECKS	TOTAL CREDIT	CREDIT IN DETAIL	BALANCE	DATE	DR CHECKS IN DETAIL	DR TOTAL CHECKS	TOTAL CREDIT	CREDIT IN DETAIL	BALANCE
Feb 7			1,005.18		1,005.18						
25		60			1,065.18						
Mar 7		50			1,115.18						
25			7,581.25		8,696.43						
Apr 2				16	8,712.43						
2		25	1,205		9,917.43						
		80.00	1,205.00		11,122.43						
May 4	9	2,500		10,225	11,132.43						
13	25				11,157.43						
20				2.60	11,160.03						
June 10		3,000			14,160.03						
		25			14,185.03						
					ACCOUNT						
					BALANCED						

AMT. 7.14 DATE 10/1/18 PAYEE 1614 Y NOTICE REC'D. 7/1/17  
 DATE OF CR. STOP PAYMENT REVOKED

Figure 75: A card like this is allotted to each depositor of a western bank and the day's debits and credits are written on it as well as on the customer's sheet (Figure 76).

current day's balances. The totals of checks and deposits, and of new balances must, of course, agree with the general book figures. When they do the day's work is proved correct.

By dividing the ledger sheets into sections and carrying along totals for each one, the work of proving the posting and balancing the day's business is greatly simplified. To insure correctness in the section totals, three or four sections are balanced up each day at odd moments. This is, of course, done by listing the balances contained in a section. In this way all of the sections are checked up and proved at least once every four or five days.

The most important advantage of this system is the check it gives. Formerly much difficulty was encountered in keeping the books in balance. Differences were common and night work was frequent. With the introduction of the new method differences became few, and when they do occur they are easy to locate. Once the check and deposit totals are proved correct "balancing up the books" is merely a matter of setting down figures.

The interlocking of the ledger operator's work with that of the statement operator removes all necessity of "calling off" balances and saves the time formerly required for that purpose. As previously stated, the two operators must post checks and deposits to the same accounts or the figures will not balance. The chance of posting an item to one account on the ledger and to another on the statement, and then of not catching the error when balances are called back, has been wiped out.

The bank also is better protected against paying overdrafts than it was before. When the statement operator posts a check to A's account, if A's balance is not sufficient to cover the check, she is prevented by the mechanism of the machine, which locks auto-

matically, from taking a balance. When this happens, she removes the sheet, fastens the check to it with a clip, and after inserting a pasteboard strip to show where the sheet has been removed, places the two to one side. If a deposit ticket comes in later in the day, she places it with the check and sheet.

Near the close of the day an officer of the bank examines these accounts and the bank learns just which customers are issuing checks before they have funds in the bank, and also, if desired, just what sort of a deposit it is paying against—whether cash or uncollected checks. No check will be run through by the operator unless it has an "O. K." on it. Should a customer attempt to "kite" checks, he will, of course, be discovered almost immediately. Unpaid checks are erased from the statement and never reach the ledger account.

On the ledger sheets overdrafts appear on the credit columns and are printed in black the same as the rest of the work but are indicated by the overdraft (O/D) sign. On the statements they appear in red. A piece of red carbon paper is slipped between the tally-roll and the sheet before the overdraft amount is printed.

Errors in footing or extending are completely done away with. About the only errors which now can occur are those caused by "blind figures." However, since every item is read three times, once by the statement operator and twice by the ledger operator the chances of these occurring are slim. The second time the ledger operator runs the checks through, and also when she lists them on the tally-roll, she follows the amount written in body of the check, and if the amount has been misread from the figures, she probably will catch the mistake.

Under the new method the likelihood of a dishonest operator-bookkeeper manipulating balances successfully is slight. The work goes through with a rush.

A fresh set of ledger sheets is opened each month and the old ones are bound in books and filed. The operators do their work in an inner room where depositors have no means of reaching them. If a customer wishes to know his balance he must make inquiry of an officer.

In addition to these two machines this bank maintains four adding machines in the clearing house, only three of which are used ordinarily, a duplex posting machine in the savings teller's cage, an automatic cashier, and three typewriters. No scratchers are used by the tellers and there is absolutely no work done by pen and ink. An automatic telephonic device recently was installed to connect the four departments, and it has saved a great deal of time and helped to provide better service to depositors.

Of course all the equipment just described need not be necessarily required by a small bank, but it was felt wise to describe a rather complete installation, and trust to the fair-minded small banker to see that doing so merely amounted to giving him a broad viewpoint of the possibilities of machinery. Of course the amount of machinery to be used must be suited to the size of the bank, but it is probably true, as most bankers agree, that there is practicable modern equipment on the market for even the smallest bank.

Machinery then, although the initial cost may seem high, within a reasonable length of time usually justifies its cost in reduced operating items covering the bookkeeping routine, in lessened pressure on the clerical force, and in smaller chances for error.



## CHAPTER XV

### HANDLING ONLY THE ACCOUNTS THAT CHANGE

**A** MIDDLE western trust company saved the expense of an extra bookkeeper and the cost of an extra bookkeeping machine by keeping an inactive balance account on what amounts to a memorandum, looseleaf index. Only the depositors' accounts which change [are handled daily by the six bookkeepers.

This bank has approximately 4,200 commercial accounts. About 1,500 change daily, and about 800 are classed as inactive. These 800 make up the inactive balance account. At the time of the nation-wide investigation made preparatory to publishing this volume, the bookkeepers were working at full capacity, and to handle the inactives would have required another machine at a cost of about \$500, as well as another bookkeeper at perhaps \$75 a month.

The inactive balance account requires attention only about every three months, when the ledgers are checked. Not long ago a check-up of this sort resulted in 250 names being added to the account, which further relieved the six bookkeepers, and permitted them to handle the increasing volume of active business more effectively.

In banks where the handwritten ledger is used, the segregation of active and inactive accounts is a decisive step toward cutting labor costs. And it can be done almost as effectively in banks operating machines, as the following instance from the experience of an eastern bank illustrates:

In this bank, however, very large accounts, although inactive, are not transferred to the inactive balance account. Looseleaf ledger sheets are used by the bookkeepers and statement clerks. The accounts are kept balanced up to date. That is, instead of bringing the balances forward once a week, each bookkeeper brings them forward daily. This can be done expeditiously as the result of segregating the inactive accounts.

Two records are kept for each account. This may appear to be a duplication of work, but as a matter of fact it serves so well as an accuracy check that the extra labor is more than justified. The actual work performed is less than under the old system, since practically only the accounts that change are handled.

The system requires posting to cards and sheets. The outfit consists of a set of large cards, one card for each depositor (Figure 75). Each card is ruled with a debit and a credit column, and a column for detail listing is assigned to each of these columns. There is also a balance column. At the top is a tab for the depositor's name.

ONE ADVANTAGE OF THIS SYSTEM IS THAT IT IS ELASTIC  
AND MAY BE EXPANDED WHENEVER NECESSARY

An auxiliary ledger is used in connection with these cards. It consists of sheets (Figure 76), with space for a week's work, on which there are debit, credit, and balance columns for each day. The names of the depositors are printed in a column at the left. These sheets are single spaced and the set of sheets (enough to take care of all the depositor's names) is kept together with spring clips while in use.

This bank has approximately 2,000 accounts and two bookkeepers handle all the work. Each man handles one half of the total of 20 sheets, and one half of the cards. The cards are filed in alphabetical order in a box agreeing with the names on the sheets, each of

Section 10 Oct. 19, 1917												
	Bal. From Cards	Dr.			Cr.			Balance				
Parsons, W.R.	\$78,821.15											
Partello, Jos. D.	76.90											
Partlan, Frank J.	695.50											
Partlow, C.J.	150.00											
Partridge, F. Harrison	56,625.75											
Paryzek, R.	6,450.91	7	16			67		5	801	91		
Pasche, Herman	15.72											
Pasold, John	5,006.78											
Patchen, Mrs. Sarah	120.00	3	00			569		3	87	74		
Paterson, Mrs. Edw. L.	5,110.00											
Paterson, John, J.	12.00											
Patrick, Jas. R.	610.00	4	06	10					203	90		
Patten, Hector, M.	78.00											
Patterson, Chas. H.	125.08											
Patton, Wm.	4,011.06	9	86	76				2	724	30		
Pauley, Jas. V.	60.07					17			77	07		
Paulsen, Arthur J.	42,220.25											
Peacock, George H.	23.00	2	167	01	5	867		3	722	99		
Pearce, Richard H.	6,600.65											
Pearson, Lemual O.	87.00											
Pearson, Ray. C.	120.50											
Pease, Robt. W.	9,000.81	67	06					8	733	75		
Peck, Ferdinand W.	56.23	1	08			126	97		182	12		
Rausch, John F.	35.00											
Raven, John H.	450.00					20		4	52	78		

Figure 76: Here is the auxiliary ledger sheet to the card system shown in Figure 75, showing how the latest totals and balances of customers can be grouped for reference. The entries are easily made and the first column is typewritten from the cards.

which represents an alphabetical section. They are also divided into 20 sections (corresponding to the sheets) and are separated in the two boxes. Here is how the system works out:

Clerk 1 posts the items from A to J on the first 10 sheets and then hands these items to Clerk 2. Clerk 2 posts them on the cards, giving to his associate in return the items from K to Z, which he already has posted on his sheets. These the first clerk posts on the corresponding cards. Thus each item passes through the hands of two bookkeepers and in addition it also is examined by the paying teller. After the items are received and posted on the sheets the balances on changed accounts only are extended in red ink. This work is done by girls.

Details can be carried on the sheets notwithstanding the fact that names are single spaced. Details are entered in the previous day's balance column between the balances, the total being carried to its proper debit or credit column. The red ink of the balances sets them off from details and no confusion results from the two sets of figures. Balances on the cards are extended as the items are posted. After all balances have been figured on both cards and sheets, the two are compared in this way:

The boxes in which the cards are held are wider than the cards. Each card, therefore, is "offset" when it is posted; that is, the card is allowed to protrude from the others but is held in position by means of a simple arrangement. Two notches are cut at the bottom of each card, either of which will fit into a ridge in the bottom of the box. When the cards are "offset," the left notch fits over this ridge.

It can readily be seen that only the accounts that have changed are handled. This also is true of the sheets—only the accounts that have items in the day's work require attention. This arrangement results in a

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saving of time that can be credited against the unnecessary daily work often done in banks on inactive accounts. It allows this bank to check the work twice, in the same time formerly required to do it once, and this has resulted in greater accuracy.

When comparing sheets and cards one clerk watches the balances, as figured on the sheets in red ink, for the day's changed accounts, and the other clerk calls the last balance on the next projecting card, pushing each card back into its proper place as it is compared. When all the balances have been compared in this way and all errors are corrected, the debit and credit columns of the sheets are footed and the totals compared with the teller's figures. This calling of balances should detect all errors, as it brings them automatically to light.

For example, should a check have been posted to the wrong account on the sheets even though correctly to the cards, the figured balances would not agree. The trouble would be discovered during the comparison and adjusted. If an item were omitted on either sheet or card, it would also be located in this manner. Other errors, such as failure to offset a card, offsetting the wrong card, wrong extension, inaccurate listing, and so on, also would come to light. The only chance for an error to get by is when both men perform exactly the same mistake, which seldom occurs.

In calling the amounts against each other no names are called and no tickets are referred to except for adjusting an error. This plan prevents depositors who may be within hearing from getting information about other depositors' accounts.

Approximately one fourth of the sheets expire each day, commencing Tuesday. Mondays and Saturdays are omitted because of the rush of business on those days. Depositors' names in alphabetical order are printed on the left edge of each sheet, and new accounts

are temporarily written in at the bottom of the sheet. When a new lot of sheets is printed, these names are printed in their proper places. Beside the customer's name at the left side of the sheet is a special balance column. As sheets are ruled to agree with adding machine spacing, it is in this column at the beginning of each new sheet that the balances are listed. These balances are taken from the cards and not from the old sheets.

From this description it will be seen that the card ledger is proved weekly in addition to the daily comparison of changed balances. The total of the listing of each new sheet or section should prove with the recapitulation in the summary. If a difference appears and is not located in the listing, it is obvious that it must have happened in the week's work of whatever section is being proved. It is impossible for a difference to run longer than a week unless all the employees concerned post the same item incorrectly or to the wrong account. An account called back incorrectly can run no longer than a week and the error will be found sooner if the account changes. If the clerk watching the balances as they are called is not sufficiently attentive he may allow a difference to go by undetected, but such an error will be found as soon as would an error in calling a balance incorrectly.

Nearly every country bank has "extra live" accounts and these accounts sometimes run into a very large number of checks issued against them daily. An average of 25 a day is nothing unusual. Deposits usually will not be so frequent, perhaps one or two a day on an average.

In some banks two sets of sheets are employed, one set taking the place of the cards heretofore described, but retaining the feature of calling balance against balance. With the sheets, attention can be directed easily by means of colored signals to important data



**St. Louis**

account and its relation to the whole business. Accounts showing a change are denoted by a checkmark so that only these have to be handled by the bookkeeper. Each morning a quick survey of the sheet gives the tellers an accurate check on the condition of each account.



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stamped upon them, such as stop payments, attachments, powers of attorney, and any other classifications required by the bank officers. Interest also can easily be computed without turning page after page in heavy books, and the statement clerk or anyone else desiring to examine an account may do it without interrupting the work of the bookkeeper.

This system can be enlarged indefinitely merely by adding more units. The detail work all can be done by girls or junior members of the clerical force. This gives the bookkeepers ample time to post to the boxes, examine dates, and the like. One section can easily be compared while another is being computed.

Cards and sheets for this system cost less than this bank formerly spent for record sheets, notwithstanding the fact that revised sheets are printed every three or four months. In this bank the linotype slugs for printing the sheets are kept at the bank. When new sheets are needed a requisition is sent to the printer for new slugs for the new accounts. When these are received all slugs are sorted alphabetically and the slugs for closed accounts taken out. The galleys of type then are sent to the printer. No printer's proof-reading is asked for, and there is no cost except for the press work and stock.

After the sheets have been used they are filed day by day in a heavy pasteboard box. When the box is full it is marked with the volume number and date, and filed away. Thus the bank has a valuable permanent file, the sheets providing general, and the cards specific, information on accounts.

A simple method of keeping balance records is valuable not only to bank officials in determining the progress and type of the account but also to the depositor, because it reveals the average increase from day to day, month to month, and year to year of his financial resources, and thereby gives him the best



**Figure 78: The Northern Trust Company, Chicago, has this compact arrangement for turning out work quickly. The illustration shows girls at open desks listing checks on machines. These items are first sorted on the tops of the desks which can be closed readily.**

# THE MERCANTILE TRUST AND SAVINGS BANK

ST. LOUIS.

*Meers & Co.*  
**FOLIO** 132

**INTEREST ACCOUNT FOR** Dec. 1917

	DAILY BALANCES	OVERDRAFTS	MARGINS	INTEREST
	3 0			
1	3 1			
2	3 1			
3	3 1			
4	3 1			
5	3 1			
6	3 1			
7	3 2			
8	3 2			
9	3 1			
10	3 0			
11	2 9			
12	2			
13	3 1			
14	3 1			
15	3 2			
16	3 2			
17	3 2			
18	3 9			
19	2 8			
20	2 5			
21	3			
22	3 1			
23	3 1			
24	3 2			
25	3 2			
26	3 1			
27	3 1			
28	3 5			
29	3 1			
30	3 1			

Figure 79: In paying interest on daily balances, this method of calculating it for each account saves in labor. This illustration takes it for granted that the minimum balance each day for the customer is placed at \$3,000. Time is saved by using only the first two figures.

sort of index of his commercial standing. The daily balance sheet shown in Figure 77 is a combination of the ledger-index and balance record used in an eastern bank. A large, looseleaf form is employed, the depositors' names being either printed or typewritten, and changed as necessary from month to month to perfect the alphabetical arrangement. If four pages of the journal are opened daily these names should be divided into four divisions, as indicated in the illustration, so that errors of entry on the first page of the journal may be checked against balances entered from the ledger after posting exclusive of the other columns.

Every change in the accounts, whether by deposits, clearings, or counters, is indicated by a check against the name, so that in taking off the balance only those folios need be turned where posting has been done. Other accounts may be transcribed from the sheet of the day previous by folding them over on the column line and running the figures across. All overdrafts are indicated in red ink, for this sheet, containing as it does the corrected balances as they stand at the close of the day, is used by the paying teller on the next day as a guide to the condition of the accounts.

Some banks pay interest upon daily balances that exceed a given sum, say 2% on balances over \$1,000. Entries of such balances are made upon a cheaper grade card but of similar dimensions, and ruled as shown in Figure 79. The bookkeeper may facilitate making these entries by using his daily balance sheets, folding them one over the other to get the balances of each depositor in a line across and then transcribing to the proper spaces on the card for the different days. Upon the day the interest is posted, balances running in excess of \$1,000 are totaled, and \$30, or as the rule may be, \$31, deducted from them since the sums must exceed \$1,000 by this amount before interest is allowed. Overdrafts are charged out and the net figures of

special or margin accounts added into the amount in a like manner, and upon the resulting total the interest is estimated and entered on the card for posting. The cards then are filed away by name in a card index tray, and can be readily referred to if necessary.

With a system of this sort a set of books, when completely written up, may be filed away, while the results remain behind in convenient form ready at a moment for reference, enabling the bank officials to cull the good business from the bad, the certain from the doubtful, thus establishing a record by which each account may be judged accurately.

## CHAPTER XVI

### HOW TO DISTRIBUTE THE BUILDING EXPENSE

**T**HE safe deposit department's rent item has been increased \$1,410, or 54%, and it seems to me to be excessive. I do not believe we should be charged the present rate per square foot for our office space. We are now charged the same rate as the bond and financial departments, and their offices are in a much more desirable part of the building."

The above comment was sent to the vice-president of one bank by the manager of the safe deposit vaults soon after this bank had installed a detailed method of assessing operation charges against its various departments. This method is practically the same as that for fixing ordinary space rentals in other office buildings and was adopted in order to prorate the department expense along the lines outlined in Chapter IV of this volume.

After the safe deposit manager complained of the rental charge against his space, it was reduced 15%, and the rental charge against a department occupying more valuable space on the first floor was increased 15%. It was obvious the division of the rental paid had been made unfairly to his department, and by watching his costs he in this instance alone reduced the expense burden his activities were asked to carry by nearly \$400.

The rental charge, as the instance just cited indicates, in any bank is a big item. A glance at the operating cost tables on pages 90 to 94 will give you further evidence on that point.

Items of insurance, heat, janitor salaries, supplies, telephones, water, towels, ice, soap and lavatory expense usually are charged against the building expense together with the rent, and it is therefore all the more necessary to prorate these items of cost to the departments on a definite basis. The method employed in the bank just mentioned illustrates how almost any bank can make this division on a reasonable basis, even if initial unfair divisions have to be corrected.

In distributing the building charge in this bank the space was divided as follows:

Basement.....	10,124½ square feet
First floor.....	10,124½ square feet
Second floor.....	7,037 square feet

This total of 27,286 square feet was subdivided by departments as shown in Figure 80, for the purpose of distributing accurately the cost of insurance, heat, light, and so on.

In fixing the actual rental charge, the bank assumed that space on the first floor within 25 feet of the street was worth twice as much as space on the first floor more than 25 feet from the street, worth twice as much as space on the second floor, and ten times as much as space in the basement. On this basis the departmental rent cost was charged according to the apportionment shown in Figure 80.

There are 24 telephones in the building, including one in the corridor for depositors, and these are distributed as follows: Financial department, 12; trust department, 5; bond department, 3; real estate department, 3; safe deposit, 1. The departmental expense for light was determined in the same way. That is, the number of sockets was counted and the resulting figure applied proportionately. Another way would have been to divide it according to the wall area in the various departments. The purely decorative lights

**FINANCIAL DEPARTMENT**

	Square Feet	Totals
Executive offices	1,408.00	
Corridors (7/10 of first floor)	1,841.00	
Corridors ( $\frac{1}{2}$ of second floor)	825.25	
First floor enclosure	2,521.50	
Second floor	1,384.00	
Basement	5,080.50	
Library	110.00	
Telephone operator (57%)	57.00	
Purchasing and printing department (71%)	170.40	13,397.65

**TRUST DEPARTMENT**

Executive offices	238.00	
Corridors ( $\frac{1}{2}$ of second floor)	825.25	
Second floor enclosure	3,007.00	
Basement	1,698.00	
Telephone operator (17%)	17.00	
Purchasing and printing department (8%)	19.20	5,804.45

**BOND DEPARTMENT**

First floor	518.00	
Corridors (1/10 of first floor)	263.00	
Second floor	308.50	
Basement	564.00	
Telephone operator (11%)	11.00	
Purchasing and printing department (8%)	19.20	1,683.70

**REAL ESTATE DEPARTMENT**

First floor enclosure	1,023.00	
Corridors (1/10 of first floor)	263.00	
Basement	747.00	
Telephone operator (11%)	11.00	
Purchasing and printing department (11%)	26.40	2,070.40

Figure 80: On this and the following two pages is shown the practical method used by one bank to tabulate its rental charges according to the number of square feet used. Figures of this sort visualize more clearly than any "guessing" just how much rent costs are.



#### SAFE DEPOSIT DEPARTMENT

	Square Feet	Totals
First floor	2,024 00	
Corridors (1/10 of first floor)	263 00	
Basement	2,035 00	
Telephone operator (3%)	3.00	
Purchasing and printing department (2%)	4.80	4,329 80
	<hr/>	
Grand total		27,286.00

#### TOTAL CHARGE

Basement	1,012.45	
First floor	7,330.05	
Second floor	3,518.50	11,861.00
	<hr/>	

#### FINANCIAL DEPARTMENT

Basement	508.05	
First floor executives	830.00	
First floor committee room	289.00	
First floor corridors	1,628.00	
First floor enclosure	1,260.75	
Second floor entresol	692.00	
Second floor corridors	412.62	
Second floor library	55.00	
Second floor telephone operator	28.50	
Second floor purchasing and printing department	85.20	5,789.12
	<hr/>	

Figure 81: As indicated on the previous page the figures shown here are part of the tabulation of space in square feet used by each department of one bank. These items enable the bank officers to tell beyond question just how much rent ought to be charged to each activity.

#### TRUST DEPARTMENT

	Square Feet	Totals
Basement	169.80	
Second floor corridors	412.63	
Second floor executive	119.00	
Second floor enclosure	1,503.50	
Second floor telephone operator	8.50	
Second floor purchasing and printing department	9.60	2,223.03

#### BOND DEPARTMENT

Basement	56.40	
First floor enclosure	518.00	
First floor corridors	232.60	
Second floor	154.25	
Second floor telephone operator	5.50	
Second floor purchasing and printing department	9.60	976.35

#### REAL ESTATE DEPARTMENT

Basement	74.70	
First floor enclosure	511.50	
First floor corridors	232.60	
Second floor telephone operator	5.50	
Second floor purchasing and printing department	13.20	837.50

#### SAFE DEPOSIT DEPARTMENT

Basement	203.50	
First floor enclosure	1,595.00	
First floor corridors	232.60	
Second floor telephone operator	1.50	
Second floor purchasing and printing department	2.40	2,035.00
Grand total		11,861.00

This sort of costing is illuminating and helpful in holding down expense. The first grouping of space, 27,286 square feet in all, was used to distribute the insurance and the heat and light costs, while the second grouping specifically fixed each department rental charge.

## 202    REDUCING YOUR OPERATING COSTS

in the main banking room were left out of the departmental calculation, because they are seldom lit. On the items of towels, ice, heat, water, and so on, each department was assessed its share on the same basis.

The advantage of this plan of estimating and distributing the building expense was that it enabled each department to make a definite handling of items which often run into large figures, but that sometimes are not given due consideration in cost finding.

Expense incidental to the maintenance and operation of the bank building should be closely controlled, investigation indicated clearly. The many small items that sometimes are allowed to go into a "catch-all" account, such as towels, lavatory supplies, and so on, usually should be charged in the building cost. When all of these items are grouped, classified, and distributed in the manner shown in Figures 80 and 81, every department is forced to stand its fair share.

The building usually has a direct bearing upon costs generally, it was found. Banks often occupy an expensive location in the heart of the business section. Taxes, which represent a large item, as indicated in the tables on pages 90 to 94, often vary considerably according to the style and size of the building, and many incidental expenses are influenced more or less by the interior arrangement of the bank offices.

A small Kansas bank, for example, won more than 250 new renters for its safe deposit department by installing a new vault. The old vault was located at the end of a long corridor, in a dark, out-of-the-way corner. Before putting in the new vault the president made inquiries and found that the old vault was unpopular because it was not easily accessible.

In providing space for the new vault, this banker remodeled the entire interior of his bank. He eliminated the counting room where the bookkeepers and tellers all had worked together. Three cages were

installed for the tellers, and the bookkeepers were provided with space near a large window. These improvements cost \$3,500. When they were completed it was easier to handle the business of the different departments. The savings department, for example, was provided with a separate cage, thus removing the confusion that took place when the business of all the departments passed through a single wicket. Loans and discounts were handled through another cage, near which a complete file of collateral and liability records was kept, and the man on duty could give quicker and more satisfactory service. The paying teller's cage was placed closest to the door.

In addition to an increase of about \$500 in safe-deposit business in a year, deposits in the commercial and savings departments were about \$350,000 higher.

AS BUSINESS EXPANDS THE QUESTION OF ADDITIONAL SPACE  
TO AFFORD ADEQUATE SERVICE IS OFTEN PUZZLING

"All of the additional work was handled with the same amount of help," said the president of this bank, "because the physical arrangement of the banking room enabled us to do the work with greater speed and accuracy. With each department filling a definite space rather than having departments frequently clashing with each other on account of poor arrangement, we were able to get the work out of the way more satisfactorily. Errors have been lessened and there is seldom any occasion now for overtime work."

With the present rate of growth of small savings accounts due to Christmas clubs, thrift clubs, and so on, and the more intensive solicitation for all types of business, every bank is face to face with the necessity of providing agreeable and helpful service if new business is to be held and developed after it is secured. Problems in distributing the rental among departments are as a result of these facts very varied.

## 204    REDUCING YOUR OPERATING COSTS

In order to take proper care of its 4,500 savings depositors, an Ohio bank needed additional room. All the space in the main banking floor was in use. There was sufficient room on the second floor, but this space was considered too valuable for use by the savings department, as many of the accounts were small and actually were being carried at a loss in the hope of building them to profitable proportions. Furthermore, there was the psychological reason against the second floor location of the time and effort required of customers to get to it.

This bank, therefore, opened a savings department in its basement for the use of thrift club members. The department was entirely remodeled. A stairway led off the main banking floor. An arched ceiling, special cages, and attractive lighting arrangement helped to gain favorable attention. At the top of the stairs an electric sign was placed calling attention to the department.

"The rent of this space is about one tenth less than that of space on the main floor and fully one fifth less than space on the second floor," said an officer of the bank, "and it is meeting every requirement admirably. We charge their share of the rental to the departments affected with these facts in mind. When the small savings depositor calls at the bank, one of the first things he sees is the electric sign at the head of the stairway leading to the basement. We never hear any complaint from these customers about having to go downstairs, although sometimes a customer grumbles about having to walk upstairs to other departments. In addition to saving in rent, we are prepared to take care of the small business in a more effective way. We still have plenty of basement room that has not been utilized and as the thrift clubs grow we can spread out without entailing the heavy rental expense that would be necessary for space on the first floor."

It is the remarkable increase in the number of small accounts in the past few years that has emphasized this problem of building expense and the resulting problem of a fair distribution of the item among departments. There are not many progressive banks, investigation indicated, which attempt to carry on all their business on one floor. To maintain the entire banking department on a ground floor obviously would furnish depositors with excellent service, but the rental cost would be practically prohibitive for many banks. In banks which have only one floor the expense of transacting business sometimes is lessened by establishing an information desk near the entrance, thus saving the time of employees in directing depositors about.

An Indiana bank, for example, has established a special department near the cages of the savings department where depositors and prospects are promptly supplied with information. This department is in charge of a young woman who makes it a point to become acquainted with the savings depositors. She lets them know that it is her business to keep them posted. When they call at the bank they almost always go to her first, and she helps them to make out their deposit tickets or their checks and thus work is taken from the teller's shoulders. This arrangement also helps to reduce the congestion of depositors around the cage windows and the handling of the savings detail is simplified.

The building has a direct relation to deposits and sometimes is a big factor in the profit and loss account. In order to insure the greatest facility and economy of operation, it is often wise to work out a detailed procedure of the particular business that the bank handles, and then fit the building to it. A national bank, for example, requires certain features in its building not so necessary in the institution handling trust and savings business on a large scale, and so on.

## 206    REDUCING YOUR OPERATING COSTS

The detailed value of new banking quarters to the development of new business and the reduction of expense recently was made the object of a nation-wide investigation by **SYSTEM**, the Magazine of Business, and the results of that investigation are assembled in another volume of this series. All we are concerned with here is the handling of the expense aspect of the question. The investigation was made among banks which recently either erected new structures or materially improved their old quarters and, among a number of others, touched on the following questions:

1. What is the "new business" value of a new building or improved quarters?
2. Have deposits increased or decreased since the occupancy of the new quarters?
3. Is the bank with the new building likely to be more favored by depositors?
4. How have improvements influenced the various costs of doing business?

This investigation indicated that there is a real commercial value in properly housing a banking institution and that a modern building often can handle a greater volume of business at much less expense, principally because of the superior physical equipment. Better facilities help to increase the loyalty of old customers and to attract new business. As the volume of business is thus increased, costs often are decreased. Employees are more contented and work is usually disposed of more promptly, thus cutting the labor charge. Therefore the book which is to be given over to a detailed consideration of the results of this investigation should prove among the most helpful of the series of which this volume you have just about finished reading is one, and be profitably useful in both large and small banks.

## APPENDIX

### TO HELP YOU FIND AND CONTROL COSTS

**O**N the following pages you will find in concrete form a number of helpful, comparative cost-of-doing-business figures for banks of varied sizes.

From these figures you can obtain an accurate idea of how bank costs are rising. Analyze them carefully—they can help you a lot.

Now turn to pages 224 and 225. There you will find space in which to set down your costs for the last two years, your average cost, the mark you are going to try for, and the mark you actually attain. Jot down the numbers of the pages on which are described methods you plan to try out in the last column on page 225, and use the memoranda pages for summarizing data that you consider will help you most.

While investigation indicates that costs have risen in general from 15% to 30% during the last 10 years, the banks in the large centers are almost a unit in putting the increase above 25%. The smaller banks place their increase in costs at from 15% to 25% during the same period. These estimates of the rate of increase are based on personal interviews made during the investigation involved in the preparation of this book with the officials of over 100 banks in three states and on direct correspondence with bankers in all sections of the country. Banks of every kind and all sizes, from the internationally known bank and its thousands of accounts, to the prairie savings bank handling less than 100 items a day, have been covered in the search for valuable figures.



TABLE I  
\*GENERAL AVERAGES—NATIONAL BANKS

Items	Middle			
	Eastern	Southern	Western	Pacific
Salaries.....	24.7%	29.5%	26.8%	31.4%
Advertising.....	9%	2.3%	2.6%	2.7%
Supplies.....	3.0%	4.8%	4.8%	5.7%
General expense.....	1.6%	1.7%	3.8%	3.6%
Rent.....	2.5%	3.5%	5.0%	4.2%
Fixtures, furniture, and mechanical equipment.....	.5%	1.1%	1.2%	2.6%
Depreciation.....	.2%	.3%	1.5%	1.7%
Taxes and insurance.....	16.0%	11.5%	9.4%	7.0%
Light, heat, and power.....	1.0%	1.9%	1.5%	.5%
Employees' bonds.....	.3%	.1%	.4%	.3%
Total.....	50.7%	56.7%	57.0%	59.7%

Many elements enter into this increase in bank costs. The rising value of business real estate; the leaning toward more expensive banking buildings of elaborate finish; more and better furnishings for the convenience of customers; modern office equipment for officers and clerks; higher salaries; a larger quantity and greater variety of supplies; larger items under general expense; higher rentals and heavier investment charges where the building is owned; the inclusion of a depreciation charge which formerly was often overlooked; light, heat, and power; taxes, insurance, employees' bonds, gratuities, collections, additional departments, and analysis systems; and service features have evidently all helped to swell the total operational costs and leave a smaller portion of total earnings to be distributed to interest charges, dividends, surplus, charge-offs, and profits.

How operational costs have fluctuated during the last 15 years in one large city bank is shown in Figure 82. These costs are given not as percentages of total earnings as in the tables, but in dollars. The actual percentages are given at the bottom of the page. 6210

\*All figures given in all the tables are percentages of total earnings.

TABLE II  
GENERAL AVERAGES—STATE BANKS

Items	Middle			
	Eastern	Southern	Western	Pacific
Salaries .....	23.8%	31.3%	25.5%	28.4%
Advertising .....	1.5%	2.0%	4.7%	3.0%
Supplies .....	4.0%	3.1%	3.9%	4.5%
General expense .....	2.0%	4.0%	3.5%	4.0%
Rent .....	5.0%	4.7%	3.2%	6.0%
Fixtures, furniture, and mechanical equipment .....	.2%	.4%	1.0%	.5%
Depreciation .....	.4%	.1%	2.0%	.6%
Taxes and insurance .....	11.0%	7.5%	6.0%	6.4%
Light, heat, and power .....	1.2%	1.4%	1.4%	2.5%
Employees' bonds .....	.5%	.8%	.3%	.2%
Total .....	49.6%	55.3%	51.5%	56.1%

Irrespective of increases in business these percentages are obviously significant.

Notice the quick rise in 1904, almost a dead level in 1905, and the fall again in 1906, followed by a strong upward climb steadily through three years, 1907, 1908, and 1909. Of the three lowest points reached, in 1905, 1906, 1913, two are higher than the preceding one. Only once since 1908 have the costs at their lowest fallen below 50% of the total earnings, while before that date they ranged under 50%. Other equally significant facts for the banker are apparent after a close study of this curve.

Further evidence of the upward trend in banking costs is offered in Figure 83. Here, in dollars, are the operating costs of a middle western bank for 23 years. The figure does not show the relation between operational expenses and total earnings, it is true, but its single curve for expenses from year to year is heavy with significance when it is remembered that this bank is the largest of three banks in a town whose population always has been less than 3,000. For, putting aside the relation of total earnings, the trend of operational costs is sharply upward.

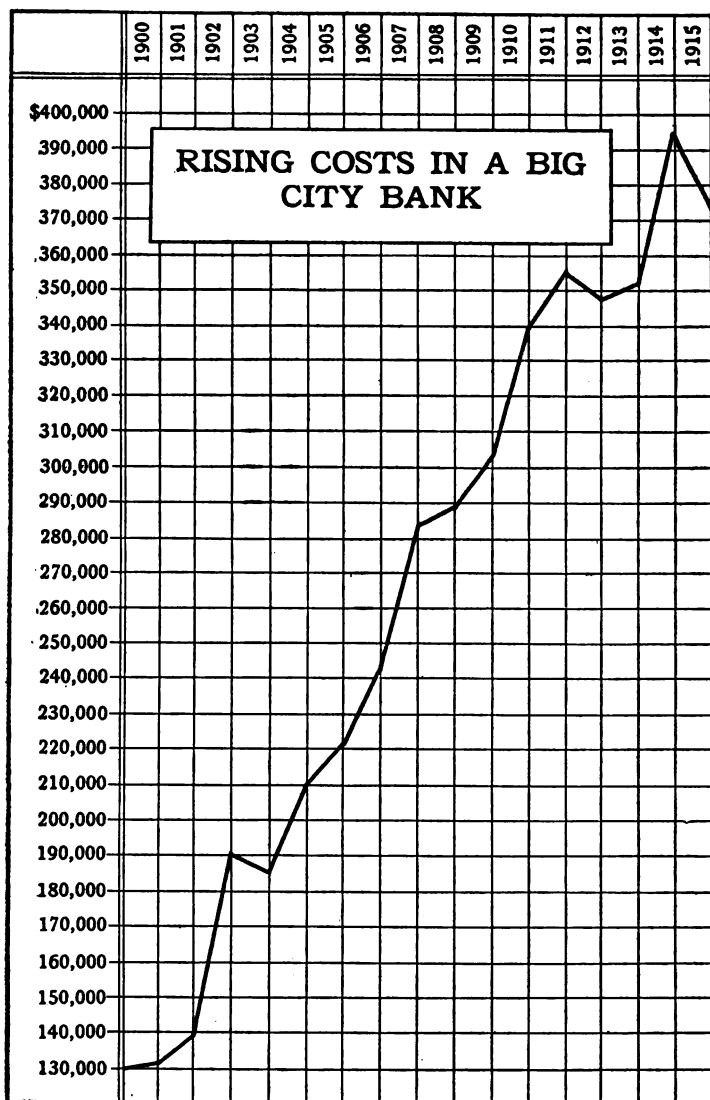
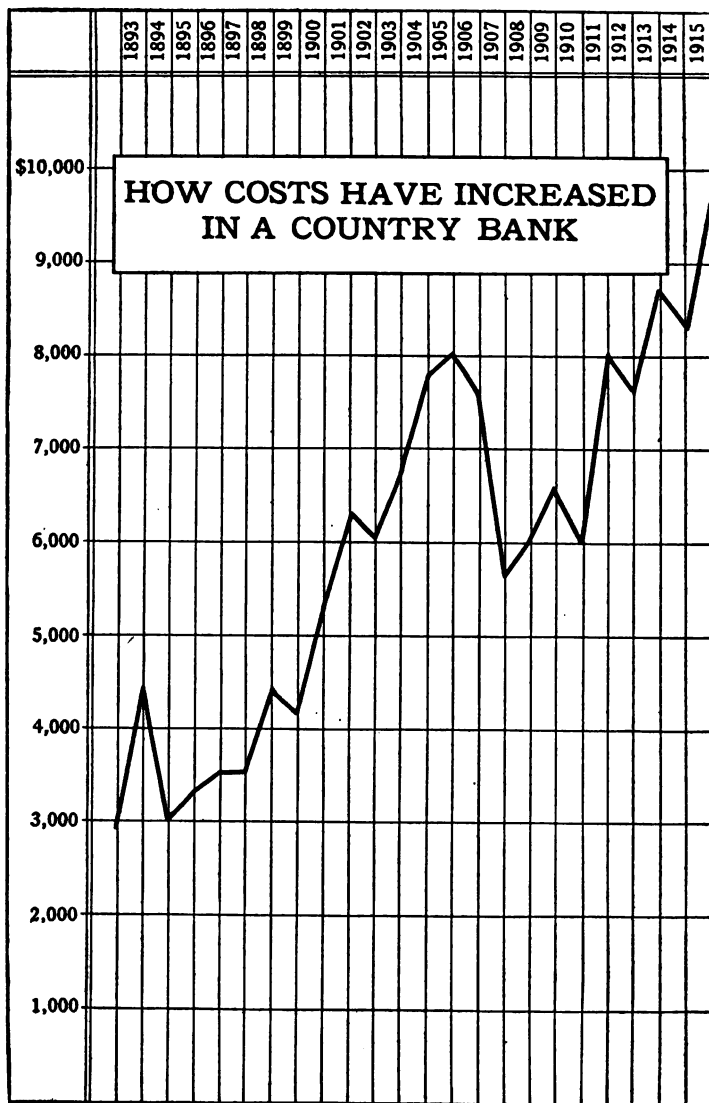


Figure 82: This graphic chart showing how costs have gone up during 16 years is based on a personal investigation by representatives of the A. W. Shaw Company in 18 states. It indicates the need of keeping careful costs to meet this problem.



**Figure 83:** This chart, which is based on figures obtained during the investigation referred to in the previous chart, shows that costs in the country bank have also ascended rapidly during the last few years with the exception of the 1907 stringency.

TABLE III  
GENERAL AVERAGES—TRUST AND SAVINGS BANKS

Items	Eastern	Southern	Middle Western	Pacific
Salaries.....	24.6%	27.0%	24.0%	28.3%
Advertising.....	3.8%	4.0%	3.9%	6.0%
Supplies.....	4.0%	3.0%	4.8%	3.0%
General expense.....	3.0%	5.0%	3.3%	4.2%
Rent.....	3.5%	5.0%	4.9%	6.2%
Fixtures, furniture, and mechanical equipment.....	.5%	.5%	1.5%	1.0%
Depreciation.....	.6%	.2%	1.0%	.8%
Taxes and insurance.....	10.5%	8.4%	6.2%	7.0%
Light, heat, and power.....	.6%	1.7%	1.4%	1.7%
Employees' bonds.....	.4%	.5%	.8%	1.0%
Total.....	51.5%	55.3%	51.8%	59.2%

General averages of the cost figures obtained have been drawn down by the editors in charge of the preparation of this book. They cover four sections of the country—eastern, southern, middle western and Pacific. For each section the averages have been established for three classes of banks—national, state, and trust and savings. A second set of averages is based on a classification of banks according to deposits, and a third set developed according to the population. Averages also are arranged by the four geographical sections, under the three classes of banks, for all items entering into operational costs. Variations for the different sections of the country are given.

The separate averages drawn down for the various types of banks afford a close and definite standard against which the national, state, trust, or savings banker may check his costs. Out of the investigation of many bankers' efforts to cut down their costs and widen the margin of profits, there come, then, reasonably indicative standards for the separate items and fair averages for the total cost of doing business in one or another class of banks above or below which the banker may find it unwise to go. With such a standard

TABLE IV  
AVERAGES BASED ON DEPOSITS—NATIONAL BANKS

ITEMS	✓ \$10,000,000 and over	\$5,000,000 to \$10,000,000	\$1,000,000 to \$5,000,000	\$500,000 to \$1,000,000	\$500,000 and under
Salaries.....	29.2%	32.0%	28.6%	33.5%	28.7%
Advertising.....	2.8%	2.5%	1.7%	4.5%	2.0%
Supplies.....	5.9%	5.3%	2.8%	7.0%	3.0%
General expense.....	3.2%	1.9%	2.2%	5.5%	4.0%
Rent.....	4.4%	4.2%	4.1%	5.5%	6.7%
Fixtures, furniture, and mechanical equipment	1.0%	1.4%	.5%	.5%	2.0%
Depreciation.....			3.3%	1.5%	1.0%
Taxes and insurance....	8.0%	12.5%	8.4%	8.0%	12.0%
Light, heat, and power.	2.5%	2.0%	.8%	1.4%	1.0%
Employees' bonds.....	.1%	.1%	.3%	.5%	.4%
Total.....	57.1%	61.9%	52.7%	67.9%	60.8%

figure at hand, the banker may more easily discover his advantages and disadvantages, know where his costs are too high, and consider readjusting his business according to a profitable standard.

General averages under 11 items of operational costs are given in Tables I, II, and III, for national banks, state banks, and trust and savings banks respectively, in eastern, southern, middle western, and Pacific states.

Remember that all figures given in all the tables are percentages of total earnings.

In Table I it is seen that the operational cost of national banks in proportion to total earnings is lowest in the East and highest on the Pacific Coast, a difference of 9%. The South is 6% higher than the East, 1% higher than the Middle West, and 3% lower than the Pacific Coast. The Middle West is over 4% higher than the East, and over 3% lower than the Pacific Coast. One of the most important reasons for these variations lies in the items of salaries.

One of the largest banks in the South reports that 37% of its total earnings goes to the salary account while another bank of the same type in a middle western

TABLE V  
AVERAGES BASED ON DEPOSITS—STATE BANKS

ITEMS	\$10,000,000 and over	\$5,000,000 to \$10,000,000	\$1,000,000 to \$5,000,000	\$500,000 to \$1,000,000	\$500,000 and under
Salaries.....	28.6%	31.0%	23.5%	26.0%	30.4%
Advertising.....	2.5%	2.8%	4.5%	4.0%	4.4%
Supplies.....	4.8%	4.3%	3.5%	4.0%	6.0%
General expense.....	3.1%	3.0%	2.0%	3.0%	4.6%
Rent.....	5.0%	6.0%	3.7%	4.0%	4.0%
Fixtures, furniture, and mechanical equipment	.5%	.5%	1.0%	.5%	2.0%
Depreciation.....	.7%	.5%	4.0%	2.5%	1.7%
Taxes and insurance....	8.0%	7.0%	6.0%	7.0%	6.3%
Light, heat, and power.	1.5%	1.4%	.5%	.5%	1.9%
Employees' bonds.....	.5%	.5%	.5%	.5%	.9%
Total.....	55.2%	57.0%	49.2%	52.0%	62.2%

community, similar in point of population, gives its salary percentage at 17%. The assets of both these banks are under \$10,000,000.

In this particular instance the activity of accounts, always a significant factor influencing costs, is an underlying cause, for while one of the banks has an extremely active business, the other controls big accounts which move slower and accordingly require less labor. Perhaps the most significant example of the salary cost in the big center national bank is found in a middle western city where the percentage is 27. This bank has given deep attention to cost accounting and has applied many ideas in systematizing and installing machinery that are calculated to effect economy. Many closely regulated national banks approach this mark, carrying from 25% to 30%.

The eastern national banks show a reduction of from 2% to 3%, in the main, while the southern national banks and the western national banks range from 3% to 4% higher, on the average. There are, to be sure, a number of exceptional conditions such as the one revealed in the southern national bank where the salary

allotment is among the highest recorded. But in these cases, the account activity and the unusual demands made upon the bank because of business peculiar to its field have a distinct tendency to raise the costs.

The high salary average on the Pacific Coast, 31.4%, which is 6% higher than on the Atlantic Coast, is due evidently in a large measure to a much higher activity of accounts and again to local economic conditions.

The importance of account activity in its bearing on operational costs is indicated in the following tabulations, which gives the number of clerks per million of deposits in typical banks in various cities:

Cities	Deposits	Clerks Per Million of Deposits
Baltimore.....	\$ 7,236,000	4 $\frac{1}{2}$ / <sub>7</sub>
Boston.....	125,000,000	2 $\frac{1}{2}$ / <sub>8</sub>
Chicago.....	30,000,000	5 $\frac{3}{8}$ / <sub>30</sub>
Chicago.....	30,000,000	4 $\frac{3}{8}$ / <sub>11</sub>
Chicago.....	20,000,000	5 $\frac{1}{2}$ / <sub>2</sub>
Cincinnati.....	20,000,000	6 $\frac{1}{4}$ / <sub>5</sub>
Denver.....	40,000,000	4 $\frac{1}{2}$ / <sub>2</sub>
Denver.....	25,000,000	4 $\frac{1}{2}$ / <sub>8</sub>
Detroit.....	22,000,000	4 $\frac{1}{4}$ / <sub>11</sub>
Indianapolis.....	13,125,000	6
Kansas City.....	30,000,000	4 $\frac{1}{2}$ / <sub>8</sub>
Kansas City.....	13,235,000	6 $\frac{1}{8}$ / <sub>6</sub>
Minneapolis.....	61,000,000	5
Philadelphia.....	89,000,000	1 $\frac{1}{2}$ / <sub>2</sub>
Philadelphia.....	59,000,000	1 $\frac{53}{8}$ / <sub>11</sub>
Pittsburgh.....	51,000,000	3 $\frac{1}{4}$ / <sub>8</sub>
St. Louis.....	34,771,000	4 $\frac{1}{2}$ / <sub>2</sub>
St. Louis.....	31,000,000	4 $\frac{1}{2}$ / <sub>2</sub>
St. Louis.....	15,000,000	2 $\frac{1}{2}$ / <sub>8</sub>
San Francisco.....	35,000,000	5 $\frac{1}{2}$ / <sub>8</sub>
San Francisco.....	35,000,000	5 $\frac{7}{10}$ / <sub>10</sub>

General averages for trust and savings banks are given in Table III. Section for section here the total cost average runs higher than for the state banks. As in the national and state banks, the East averages lower than the Pacific Coast, the Middle West and South lie in between, with the South slightly higher.

Trust and savings banks all over the United States show a smaller indicated salary percentage than the



TABLE VI  
AVERAGES BASED ON DEPOSITS—TRUST AND  
SAVINGS BANKS

ITEMS	\$10,000,000 and over	\$5,000,000 to \$10,000,000	\$1,000,000 to \$5,000,000	\$500,000 to \$1,000,000	\$500,000 and under
Salaries.....	24.8%	29.9%	26.9%	25.0%	28.0%
Advertising.....	4.8%	4.2%	4.6%	4.0%	5.0%
Supplies.....	6.0%	5.5%	4.9%	3.8%	4.5%
General expense.....	3.3%	4.8%	4.3%	4.0%	4.0%
Rent.....	3.4%	5.8%	4.8%	8.0%	7.2%
Fixtures, furniture, and mechanical equipment	.1%	1.4%	1.7%	1.2%	1.0%
Depreciation.....	.....	.....	.....	.....	.....
Taxes and insurance....	8.0%	4.3%	6.9%	8.0%	7.0%
Light, heat, and power.	.2%	.8%	1.6%	1.5%	1.3%
Employees' bonds.....	.3%	1.0%	.3%	.5%	.4%
Total.....	50.9%	57.7%	56.0%	56.0%	58.4%

national and state banks, and at the same time among them are found institutions which evidently are in the first rank in earning power. The mutual savings banks are apparently confined largely to the East, while the stock savings banks appear more numerous elsewhere in the country. The eastern territory evidently leads, too, in the number of "Simon pure" savings banks, while in other sections the savings branch often is affiliated with other banking activities. It obviously is true that a savings bank normally can transact business with less labor because of the very nature of its business. The bank of discount, that is, the national or state bank, which deals more actively in commercial lines, normally must employ more help, hence the salary increase indicated on the tables.

In Tables IV, V, and VI, the cost averages are based on deposits. Tables VII, VIII, and IX give averages based on populations. These two methods of classification work out into finer detail the general averages which have been discussed. They bring the averages down to a finer edge and give you a still sharper indicative standard by which you may test your own

TABLE VII  
AVERAGES BASED ON POPULATION—NATIONAL BANKS

ITEMS	1,000,000 and over	100,000 ✓ to 1,000,000	10,000 to 100,000	10,000 and under
Salaries.....	28.0%	28.7%	28.9%	29.1%
Advertising.....	4.0%	2.5%	2.7%	1.6%
Supplies.....	5.5%	4.7%	5.4%	3.7%
General expense.....	3.0%	2.4%	3.2%	2.8%
Rent.....	4.0%	3.7%	5.7%	4.3%
Fixtures, furniture, and me- chanical equipment.....	.6%	2.2%	1.0%	.8%
Depreciation.....	.....	1.0%	2.6%	.5%
Taxes and insurance.....	8.0%	10.3%	9.8%	10.4%
Light, heat, and power.....	5.0%	.3%	.8%	.8%
Employees' bonds.....	.3%	.1%	.4%	.4%
Total.....	58.4%	55.9%	60.5%	54.4%

costs, enabling you to pick out an indicative average which approximately fits your bank.

Examination of the tables of indicative averages based on deposits reveals an interesting situation. The total costs for state and national banks with deposits of from \$1,000,000 to \$5,000,000 are evidently lower than those in any other division of deposits, not excepting the banks with deposits exceeding \$10,000,000 which prove to be a close second. Of the three large deposit groups, the high water mark is indicated in the banks of from \$5,000,000 to \$10,000,000 deposits.

It should be noted, however, that the banks of the \$5,000,000 to the \$10,000,000 group are far more numerous than their big brother banks, ranking over \$10,000,000. Because of this fact, the figures for the \$5,000,000 to \$10,000,000 group might be accepted as more truly indicative of costs in banking institutions handling a variety of commercial business on a comparatively large scale. The banks in the group handling deposits of less than \$5,000,000 are located chiefly in the less dense points of population and the demands made upon them are neither nearly as diversified, nor

TABLE VIII  
AVERAGES BASED ON POPULATION—STATE BANKS

ITEMS	1,000,000 and over	100,000 to 1,000,000	10,000 to 100,000	10,000 and under
Salaries.....	26.0%	26.0%	27.0%	30.0%
Advertising.....	3.5%	5.1%	2.0%	4.2%
Supplies.....	5.0%	3.3%	1.5%	9.7%
General expense.....	2.5%	3.5%	2.0%	2.4%
Rent.....	4.0%	8.1%	4.0%	2.5%
Fixtures, furniture, and me- chanical equipment.....	.2%	1.0%	1.0%	2.0%
Depreciation.....	.....	.....	.....	.....
Taxes and insurance.....	8.5%	7.0%	5.0%	5.5%
Light, heat, and power.....	.5%	1.5%	.3%	1.4%
Employees' bonds.....	.8%	.5%	.1%	.3%
Total.....	51.0%	56.0%	42.9%	53.0%

on as large a scale, as those prevalent in the localities of larger population.

In the national and state banks with less than \$500,000 deposits, a varying condition was indicated in respect to salaries. Some were apparently extremely low and others were apparently unusually high. Many of the smaller bankers in reporting their expenses, gave fragmentary quotations, revealing an evident lack of system in keeping track of costs.

Trust and savings banks in the large centers of population evidently operate at a lower cost than national or state banks. This type of bank flourishes chiefly in the urban centers, although the smaller trust and savings bank is to be found throughout the country. The investigation indicated that in the big centers the trust and savings banks with deposits of more than \$10,000,000 do operate at a substantially lower expense than other types of banks.

In Table X are listed for convenient reference, comparison, and contrast the general averages indicated for salaries for the three kinds of banks in the four sections. What may be called a country-wide

TABLE IX  
AVERAGES BASED ON POPULATION—TRUST AND  
SAVINGS BANKS

ITEMS	1,000,000 and over	100,000 to 1,000,000	10,000 to 100,000	1,000 and under
Salaries.....	28.9%	30.0%	30.6%	25.0%
Advertising.....	3.8%	4.0%	4.2%	3.0%
Supplies.....	6.0%	3.0%	3.1%	4.0%
General expense.....	5.0%	4.0%	3.5%	4.5%
Rent.....	4.6%	6.0%	5.0%	2.0%
Fixtures, furniture and me- chanical equipment.....	.2%	1.0%	.4%	1.0%
Depreciation.....	.....	.....	.....	.....
Taxes and insurance.....	6.7%	4.0%	5.5%	8.0%
Light, heat, and power.....	1.5%	.9%	1.0%	1.5%
Employees' bonds.....	.8%	.5%	.6%	.3%
Total.....	55.5%	53.4%	53.9%	49.3%

indicative average for national banks is 28.1%, for state banks 27.2%, and for trust and savings banks 25.9%. General indicative averages for advertising for the three groups of banks appear in Table XI.

Advertising apparently has become a fixed charge in almost all national banks throughout the country. It is doubtless another evidence of the intensity of competition. While the national bank's appropriation for advertising normally is not as heavy as that of the savings bank, the expenditure is nevertheless a fixed charge, controlled carefully by some banks and abused by others. Effective advertising methods are taken up in detail in the volume of this series devoted to advertising and service.

Table XI shows graphically the indicated variation in advertising expenditures for national and state banks, as against the trust and savings banks. The expenditure of the latter group evidently are more than 2% higher. The nature of the business conducted by the trust and savings bank apparently justifies the larger appropriation since it is the purpose of this type of bank to encourage the savings idea in every way.

TABLE X  
SALARIES

	National Banks	State Banks	Trust and Savings Banks
Eastern.....	24.7%	23.8%	24.6%
Southern.....	29.5%	31.3%	27.0%
Middle Western.....	26.8%	25.5%	24.0%
Pacific.....✓	31.4%	28.4%	28.3%
Total average.....	28.1%	27.2%	25.9%

TABLE XI  
ADVERTISING

	National Banks	State Banks	Trust and Savings Banks
Eastern.....	0.9%	1.5%	3.8%
Southern.....	2.3%	2.0%	4.0%
Middle Western.....	2.6%	4.7%	3.9%
Pacific.....	2.7%	3.0%	6.0%
Total average.....	2.1%	2.8%	4.4%

The indicated cost of supplies is covered in Table XII. In nearly all banks with deposits of \$10,000,000 or more the supplies account covers expenditures for printing, stationery, and postage only. In smaller banks this item includes other expenditures. Whereas the big bank makes charges to building maintenance for ice, water, clerical fixtures, and janitor supplies, these items are classified under the distinct head of "supplies" in nearly all of the banks outside the big centers. In fact, one Missouri banker charges coal into his supply account. It is therefore apparent that a sharp classification of the "supplies" account would require a detailed treatment impossible here.

Table XII is intended to show the indicated variation in expenditure for "supplies" throughout the country and in the various types of banks. Here again it is indicated that the eastern national and state banks are lowest while the Pacific banks are highest. This is apparently accounted for, aside from the

TABLE XII  
SUPPLIES

	National Banks	State Banks	Trust and Savings Banks
Eastern.....	3.0%	4.0%	4.0%
Southern.....	4.8%	3.1%	3.0%
Middle Western.....	4.8%	3.9%	4.8%
Pacific.....	5.7%	4.5%	3.0%
Total average.....	4.5%	3.8%	3.7%

TABLE XIII  
GENERAL EXPENSES

	National Banks	State Banks	Trust and Savings Banks
Eastern.....	1.6%	2.0%	3.0%
Southern.....	1.7%	4.0%	5.0%
Middle Western.....	3.8%	3.5%	3.3%
Pacific.....	3.6%	4.0%	4.2%
Total average.....	2.6%	3.3%	3.8%

general economic conditions prevailing in the East and the West, by the fact that the eastern banks no doubt buy more of their supplies at a lower cost. The trust and savings banks of the East and Middle West apparently spend more for supplies than those in the southern and Pacific states, as the table indicates. The larger trust and savings banks are in the eastern and middle western territory and their expenditures for printed matter to attract savings accounts, as well as for stationery and postage, are apparently substantially heavier than those prevailing among the national and state banks.

What is true of the large banks with relation to supplies apparently applies with almost equal force in regard to general expense, as Table XIII indicates. Apportionment is evidently made alike in scarcely any two banks. Figures from banks, notably the state banks of the South, revealed general expense figures out of line with the averages from other parts of the country. The smaller banks, too, computed general

TABLE XIV  
RENT

	National Banks	State Banks	Trust and Savings Banks
Eastern.....	2.5%	5.0%	3.5%
Southern.....	3.5%	4.7%	5.0%
Middle Western.....	5.0%	3.2%	3.3%
Pacific.....	4.2%	6.0%	4.2%
Total average.....	3.8%	4.7%	4.0%

expense on widely different bases. Figures which were so high as to be in sharp contrast to the general prevailing averages were not included.

It will be noted in Table XIII that the eastern banks apparently hold the general expense below 2%, except in the trust and savings banks, which evidently pay 3%. The southern national banks apparently confine the general expense to an average of 1.7%, while the state banks in the same territory evidently jump to 4%. In the latter group are quite a number of small banks.

The indicated cost of the general expenses of middle western national and state banks does not differ much, although they are in excess of 3%, while the Pacific Coast banks are evidently close to 4%.

The trust and savings banks apparently are a trifle higher in respect to the cost of general expenses, notably those in the southern group, which strike an indicated average of 5%. Here again the East clings to the bottom of the column with 3% as an indicated average, while that of the Pacific group is 4.2%.

The rental item (Table XIV) is a fixed expense entirely in control of the bank management. As the table indicates, rental varies sharply in the national banks throughout the country, the eastern banks paying less than 3%, while the Middle West spends 5%. It is only 1% higher in the South than in the East, while the Pacific states approach 5%. Contrast

the rental item in Table I with the expense of taxes and insurance and it will be observed that while rental expense in the densely populated East is comparatively low, the taxes are much higher than in any other section, namely 16%, which is 7% higher than in the Middle West and 9% higher than in the Pacific states. Most national banks own their buildings and those constructed in recent years are notable for imposing exteriors. If the bank owns its building it charges off certain appropriate charges on its investment.

An item covering fixtures, furniture, and mechanical equipment is carried by banks throughout the country as a fixed charge, although it is distributed in various ways. In the periodical reports of the condition of the banks, this item always appears. It has commanded more recognition than ever in recent years because of the advent of various machines designed to reduce labor costs and facilitate operation.

Now that you have carefully read and digested these indicated percentages of bank costs of doing business, you are in a position to use the next two pages for keeping a record of your own costs with the greatest benefit to your own business.



## WHERE MY BANK STANDS NOW

Items	1 Typical Costs	2 My Costs Year Before Last	3 My Costs Last Year	4 My Average
Salaries				
Advertising				
Supplies				
General Expense				
Rent				
Fixtures, Furniture, and Mechanical Equipment				
Depreciation				
Taxes and Insurance				
Light, Heat, and Power				
Employees' Bonds				
Total Costs				

## MARKS TO AIM FOR

5 Difference between 1 and 4 Why?	6 What I Am Going to Try for	7 My Costs for Next Year	8 Try Methods Described on Pages

## MEMORANDA

## **MEMORANDA**

## MEMORANDA

## **MEMORANDA**



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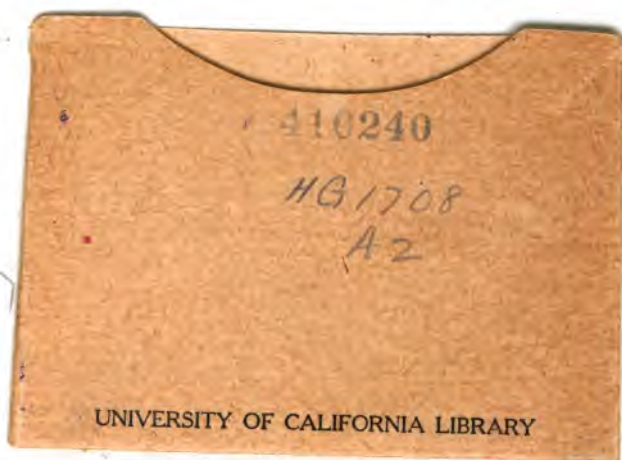
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